MEDUSA ANALYTIC

Manual

How to

This document is about how to use Medusa Analytic

Version 1.1

SoftPro Medical Solution

Medusa Analytic

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Using Medusa Analytic

Medusa Analytic is a add on module to Medusa based on a Logi application that provides a complete self-service reporting experience. This chapter is intended for *end-users* who'll be using the application via their browsers.

Medusa Analytic is a web application that's part of the Medusa product and bring Self-Service Reporting functionality. It allows you to:

- Create charts, tables, and other visualizations of your data
- Save these "visuals" in your own gallery
- Combine them into dashboards
- Place them in reports that can be shared with others
- Schedule reports for automatic generation and distribution

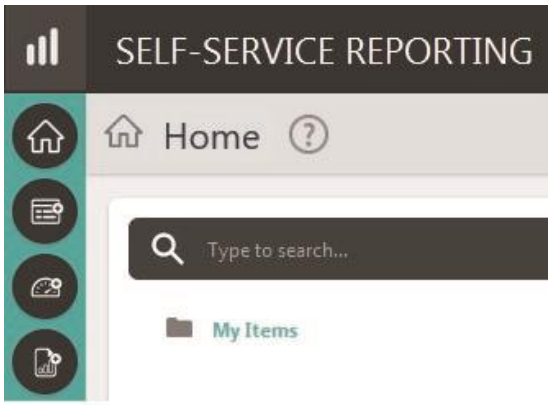
and more.

This version of Medusa Analytic is related to the following Logi products:

- Analysis Discovery version 3.0
- Analysis SSRM version 12.5

The Home Page

When you first launch Medusa Analytic for this first time, you'll most likely see this initial page:



This is your **Home** page. The icons on the left side are menu options for different features in the application. The "Home" icon at the top of the menu will always return you to this page and the gray "Question Mark" icon will display help text describing the application features.

Your application may also include a different title at the top and, at the right-hand end of the title bar, you may also see a user icon with your name and a Logout link.

If you've been designated as an *Administrative User*, you may see an additional icons and side menu items for special features. These features are discussed later in the Admin Tasks section in this document.

Once you begin to create analyses, dashboards, and reports, they'll appear on the Home page, in the **My Items** folder shown above. Items in folders appear in the list shown and can be Analyses, Dashboard, or Reports.

To use Medusa Analytic, you first create and save Analyses, and then build Dashboards and Reports with them.

New items are created using the options in the menu on the left-hand side of the page:

Depending on the configuration of your application, you may see one or both of the **Visual Analysis** and **Analysis** options shown above. Each uses a different tool to create an analysis.

As you work with these items, they're saved automatically. In subsequent sessions, you can re-open or delete them from this page. And, if scheduling or sharing has been enabled, you can schedule or share them from this page as well (this is described in detail in later sections)

The **Search** feature lets you filter the list, just by typing a name into it and you can organize your work into folders and share them.

About Analyses

The general purpose of this application is to let you easily *visualize* your data, so that you can understand it.

Medusa Analytic lets you see your data in tables and charts, in a variety of arrangements. It allows you to perform a wide range of activities with your data, including sorting, grouping, and filtering.

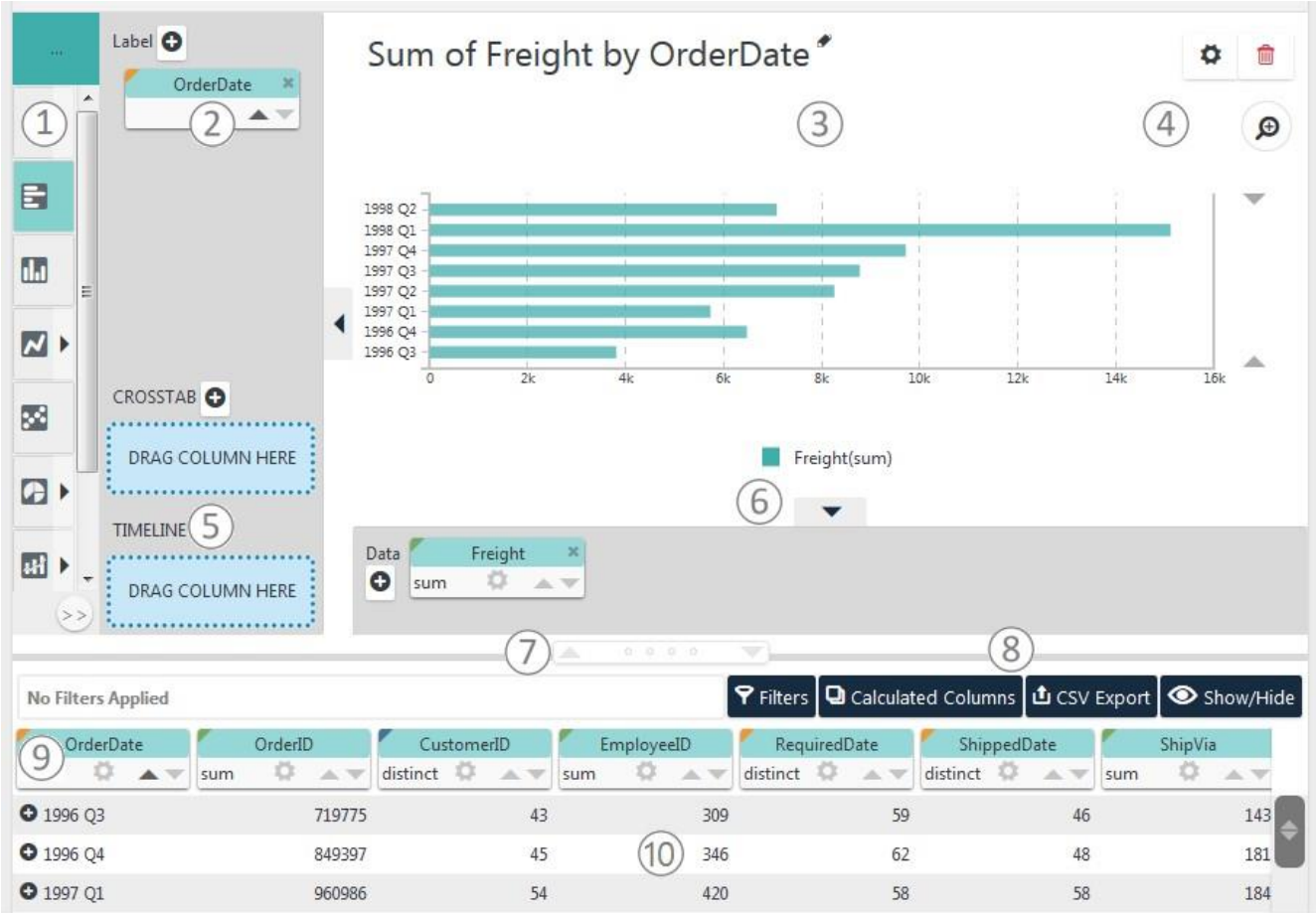
There are two ways of making Analyses in Medusa BI-Analytic. Either by using Visual Analysis (thinkspace) or by using Analysis (Analysis Grid)

Visual Analysis

The **Thinkspace** is a component in a Logi application that allows you enjoy a rich, highly-interactive analysis experience. This section is intended for end-users who'll be using the Thinkspace in a Logi application via their browsers.

About the Thinkspace

The **Thinkspace** provides you with an advanced, easy-to-use interface so that you can quickly create your own data analyses. It's smart, too: "best-fit" charts are automatically suggested by a built-in "recommendation engine" and data is organized automatically to make easier to use.



The user interface consists of two areas, as shown above. The upper area displays the charts you create and the lower area displays your data in a table. Here are some more details, keyed to the numbers in the image above:

1. **Visualization Menu** - Click to select a visualization appropriate for your data and to easily switch between types.
2. **Pills** - Column "pills" in X- and Y-axis "drop zones" identify the data columns used to create the visualization.
3. **Visualization** - A Chart, Crosstab Table, or other visualization is displayed here when you select its data.
4. **Settings** icons - Click to control the legend (may also have other purposes), delete the visualization, or choose selection modes.
5. **Extra Columns** drop zones - Dropping column pills here to create a Crosstab Table or a Timeline Chart.
6. **Show/Hide** arrows - Click to show/hide pill drop zones; allows you to see a larger view of the visualization.
7. **Table Resizer** - Click arrows or drag dots to change the number of table *rows* shown.
8. **Data Enrichment** - Click to open drop zone and controls for creating data filters, calculated columns, and do more. Once created, filters are listed in adjacent area.
9. **Column Pills** - Pills appear at the top of each column of data in the table; they contain sorting, filtering, and other controls.
10. **Data Table** - Data available for analysis appears in a table here.

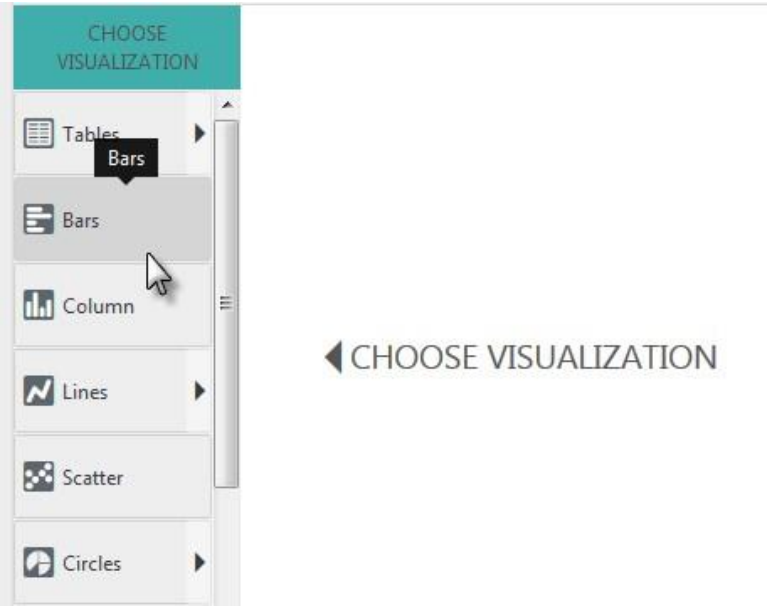
Individual controls are discussed in detail later on in this section.

The Thinkspace is an investigative tool and, as such, the charts and calculations you create in it are for quick analysis of your data. If your application has been configured to do so, they can be saved and re-used in later sessions.

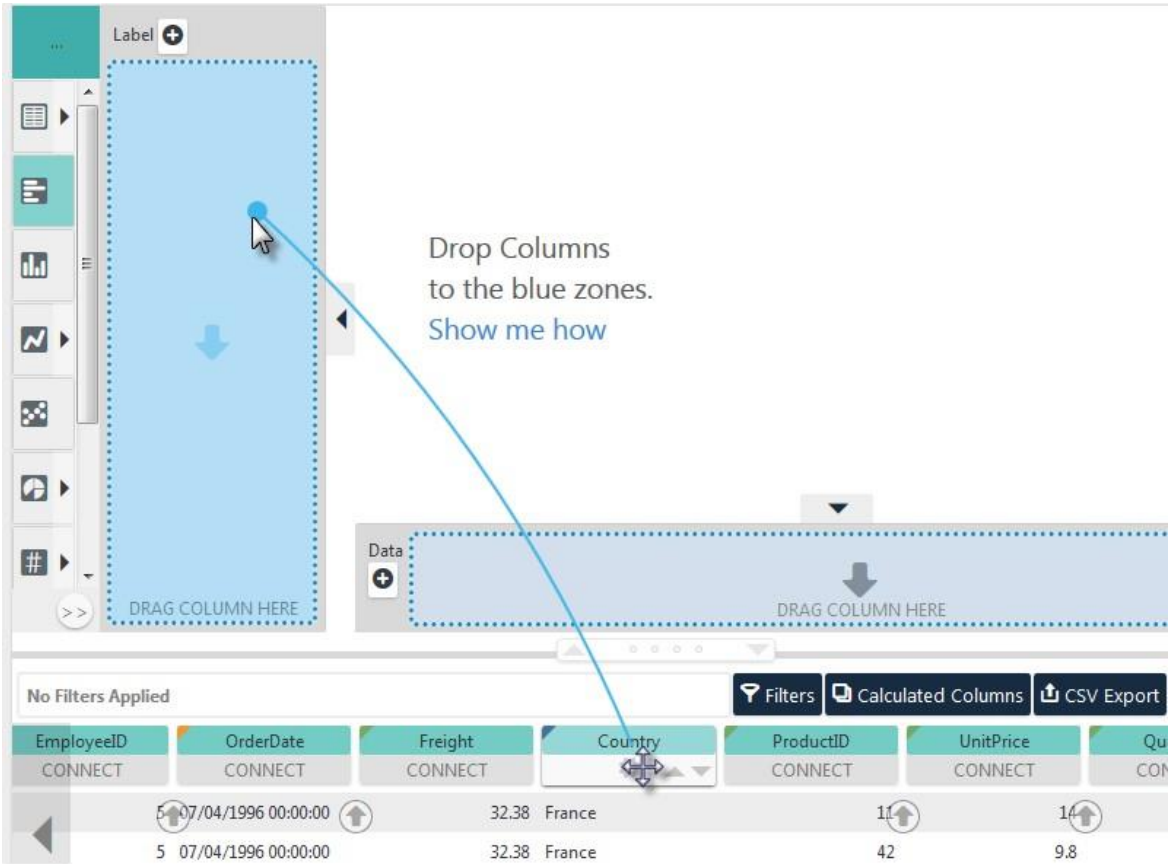
Your First Chart in Three Easy Steps

Let's make your first visualization, a bar chart, so you can see how easy it is to do. In this, and the following examples, we'll use data from the Northwind database but you can use any data with similar data types to follow along.

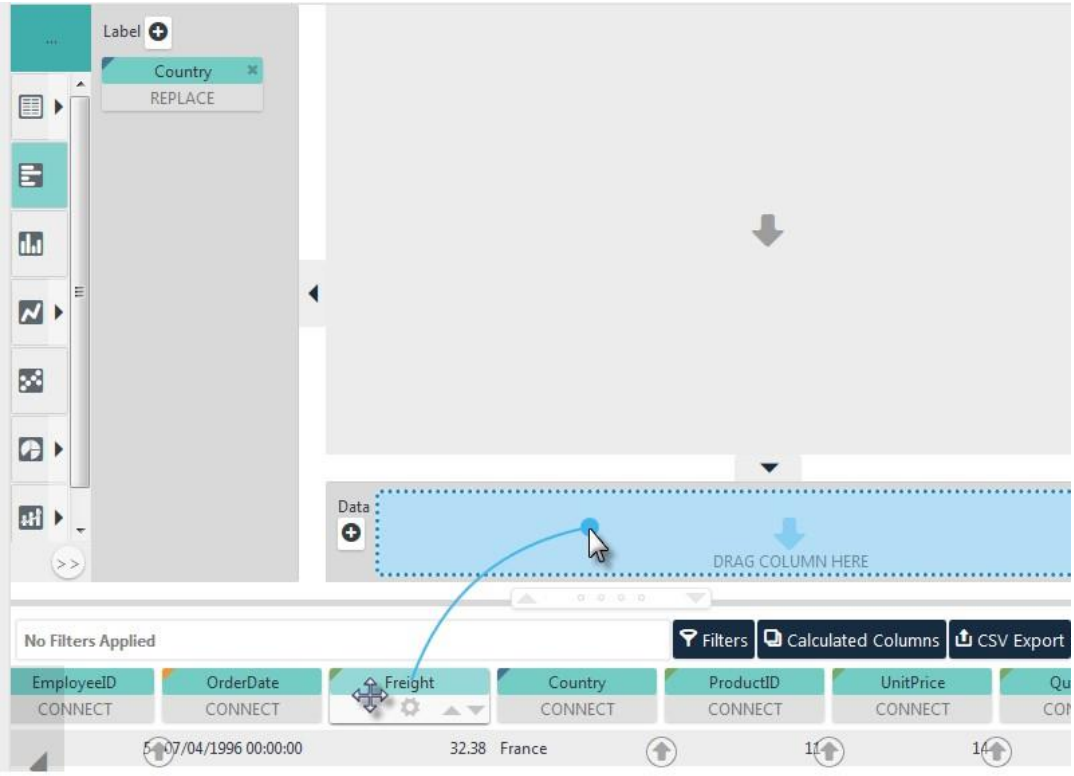
In this example, we'll create a chart that shows the sum of freight charges by county. Run your application and access the Thinkspace.



Step 1. After the Thinkspace loads, select the **Bars** chart from the visualizations menu on the left of the page, as shown above.



Step 2. Two blue "drop zones" will appear, as shown above. In the data table, click the Country column "pill", drag it to the Label drop zone, and drop it there. We call the line that appears when you drag a pill the "Blue Dot Connector".



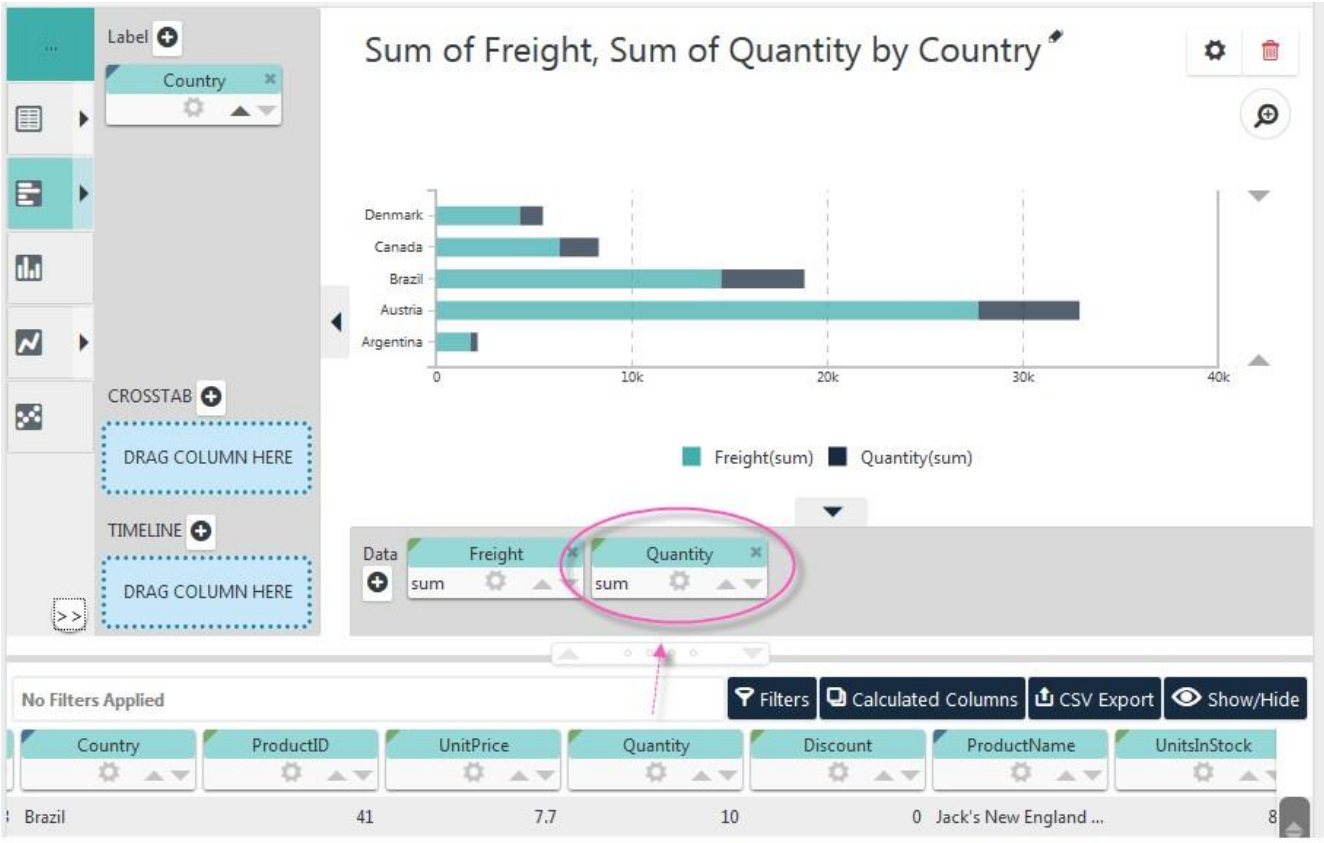
Step 3. Repeat the process by dragging the Freight column pill into the Data drop zone, as shown above.

A chart will be instantly generated, as shown above. You've just learned the Thinkspace's most important technique: dragging and dropping pills. That *was* easy, wasn't it?

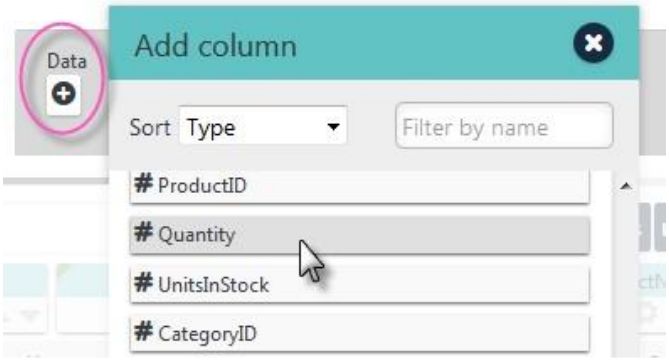
However, it can be *even easier*. We can combine all three steps into *one*! Let's start over: click the red Trashcan icon in the upper-right corner to remove the chart. Now, just drag the data table's Country column pill and drop it onto the Freight column pill, as shown above. The same chart will be rendered.
Here's what happened: The Thinkspace automatically "recommended" the Bars chart as the best fit for the data. The column pill that you dragged the Blue Dot Connector *from* (Country) was identified as the Y-axis or Label values, and the pill you *dropped it on* (Freight) was identified as the X-axis or Data values. The chart was then rendered. Notice that the pills for each column also appear next to the chart in the appropriate axis zones.

Additional Thinkspace Features

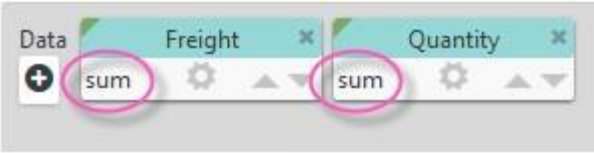
Let's examine some other Thinkspace features:



You can also drag-and-drop *additional* pills into an axis zone to add additional series to the chart. In the example shown above, the Quantity column pill has been dragged into our earlier chart, in the X-axis drop zone, producing a chart with two "stacked" series.

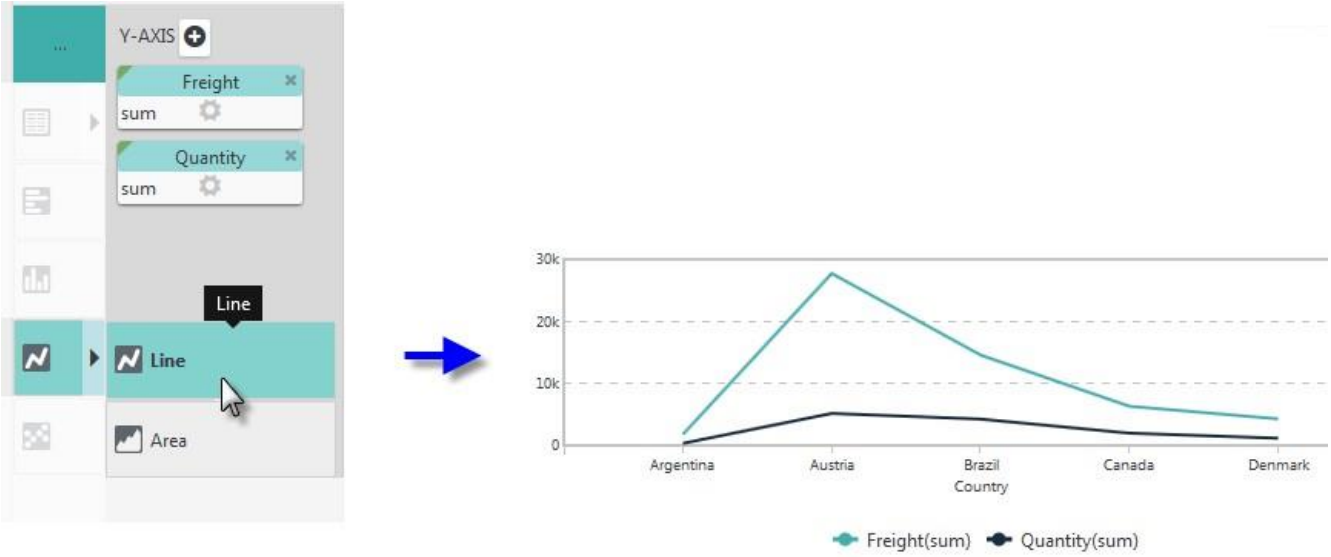


If you have difficulty dragging-and-dropping pills using the Blue Dot Connector, for instance on a mobile device, you can also add columns by clicking the "+" icon, circled above, and selecting them from the **Add Column** dialog box.



Notice the word "sum", circled above, has appeared in the X-axis pills. This indicates the aggregation the Thinkspace employed after analyzing the data and making an "educated guess" about the best choice to use. We'll discuss this technology in more detail in our document about working with columns.

If you want to *remove* a pill that you dragged to a drop zone, just click its "X" icon, shown circled above.



You can use the **Visualizations** menu, at the left side of the Thinkspace to change the chart type, as shown above. The menu presents the charts the Thinkspace recommends as the best way to visualize the data you've selected. When you select a different chart type, you may see that the X- and Y-axis pills have been swapped, as needed.

You can control the size of the chart rendering area by using the icons circled above (and one for vertical space, not shown) to expand or collapse the menu and drop zones.

You've just mastered the basics of using the Thinkspace. Well done!

To expand your skills with the Thinkspace, read the following chapters in this document:

- *Working with Columns*
- *Working with Charts*
- *Working with Crosstabs*

Saving Your Visualizations

The Thinkspace includes an optional feature that lets you save the settings and visualizations you've created and re-use them in a later session.

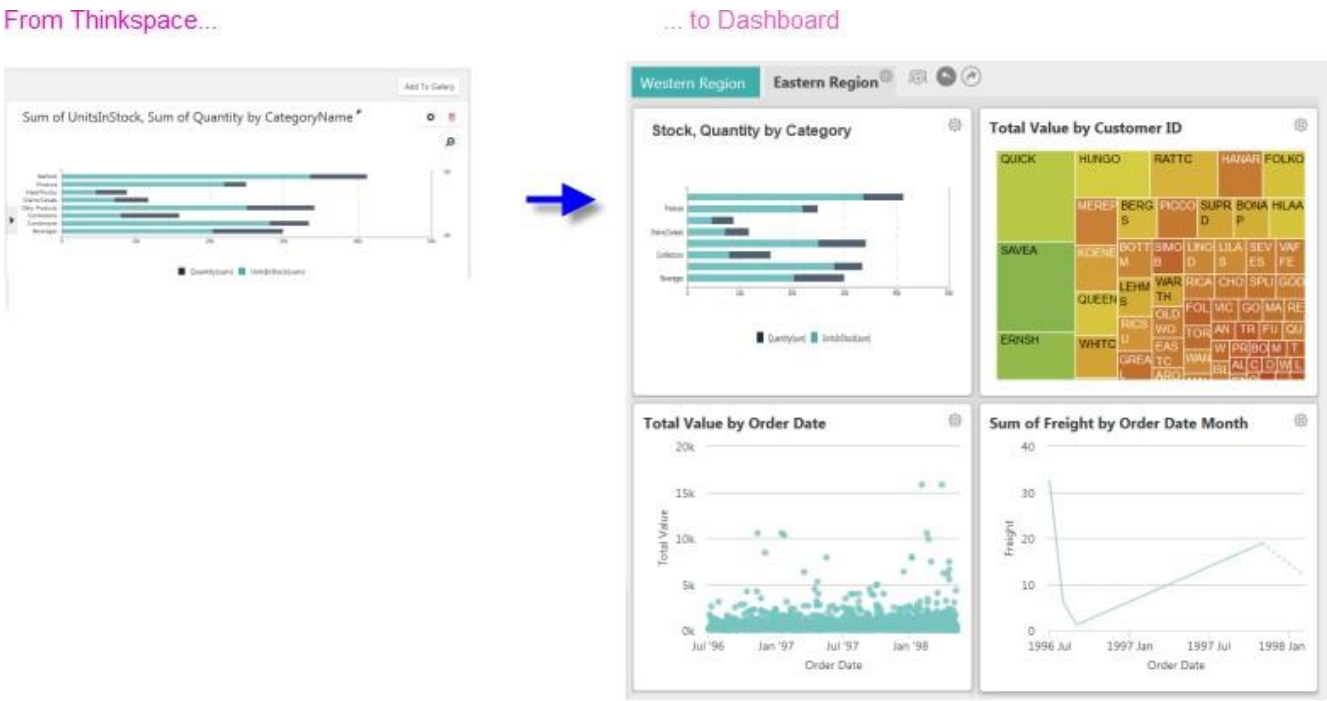
If your application has been configured for this feature, the Thinkspace will display a **Save** button, as shown above. Click it to save your settings and the chart.

Your application will include other buttons or links, outside of the Thinkspace, to retrieve and use the saved settings.

Adding Your Visualizations to Dashboards and Galleries

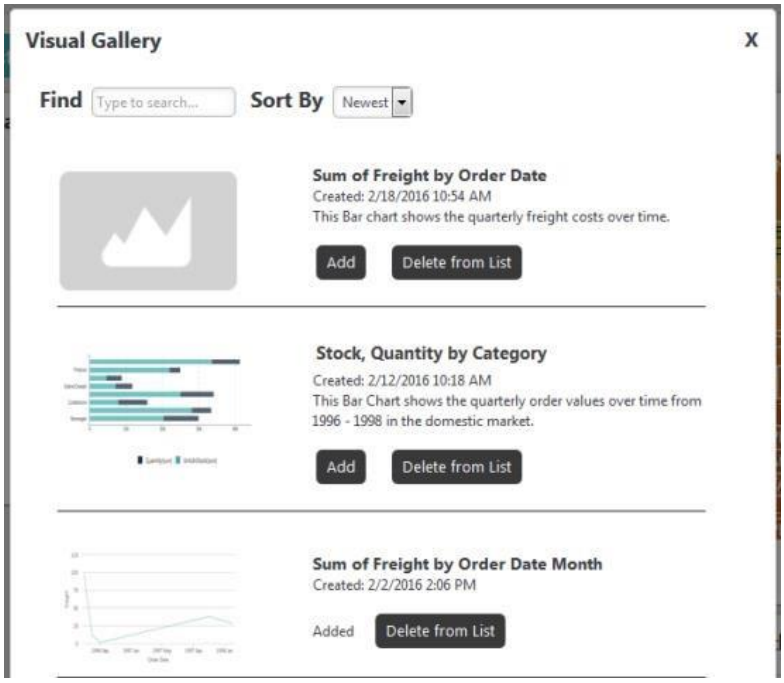
The Thinkspace includes an optional feature that lets you create a visualization in the Thinkspace and then add it as a new panel in an existing Logi Dashboard in another report, or add it to a Visual Gallery.

If your application has been configured for this feature, the Thinkspace will display a button like the one shown above. It may say "Add to Gallery" or "Add to Dashboard" or something similar, depending upon how the application was configured.



When configured for use with a Dashboard and the button is clicked, the visualization is added immediately as a *new panel* in the Dashboard, as shown above. Or, if it's configured for use with a Visual Gallery, the visualization is added to the gallery but no immediate insertion occurs.

Just before the visualization is saved, you'll be prompted for the **Panel Title** (with the chart title from the Thinkspace provided as a suggestion) and an optional description for display.

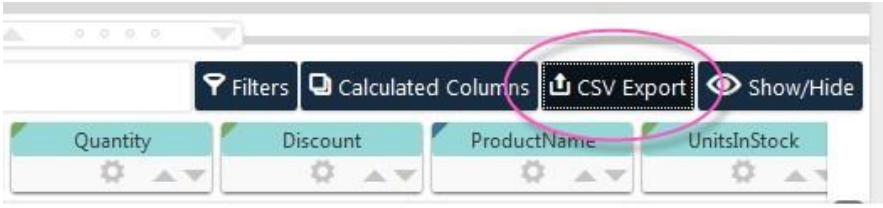


The new visualization thereafter appears in the Dashboard Configuration Page or the Visual Gallery, as shown above, just like any other resource, complete with a thumbnail image. The visualization can be removed from the visible dashboard panels and from the configuration page or gallery entirely, using the usual controls.

You can insert multiple charts into a Dashboard using this technique. For more information about Dashboards, see our online document *Introducing the Dashboard*.

Exporting Data to CSV File

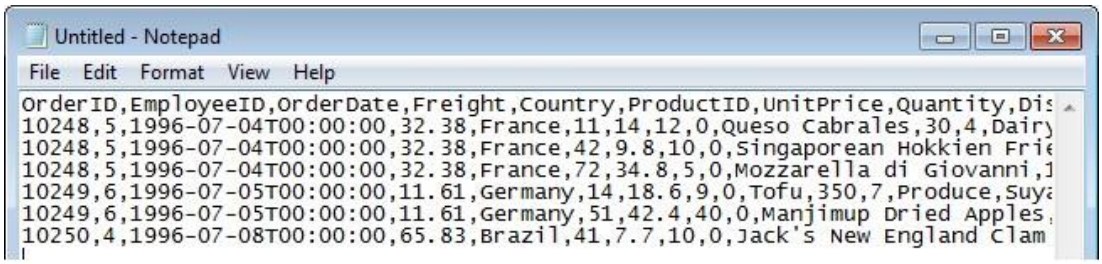
The Thinkspace includes a feature that allows you to export the data in your table to a file in standard CommaSeparated Values (CSV) format.



Click the **CSV Export** button circled in the image above to initiate an export. All columns and all rows in the table will be exported.

Attempting to export a very large number of rows might take a long time.

If you have an application, such as Excel, configured for CSV files, you'll prompted to open or save the file.



Your table data will be exported, as shown above, with column names in the first row.

Working with Columns

The Thinkspace lets you manipulate your data through its column objects, column pills, and other interfaces. In this chapter, we'll discuss the actions available to you, including grouping and filtering data. Let's start with how column data types are represented.

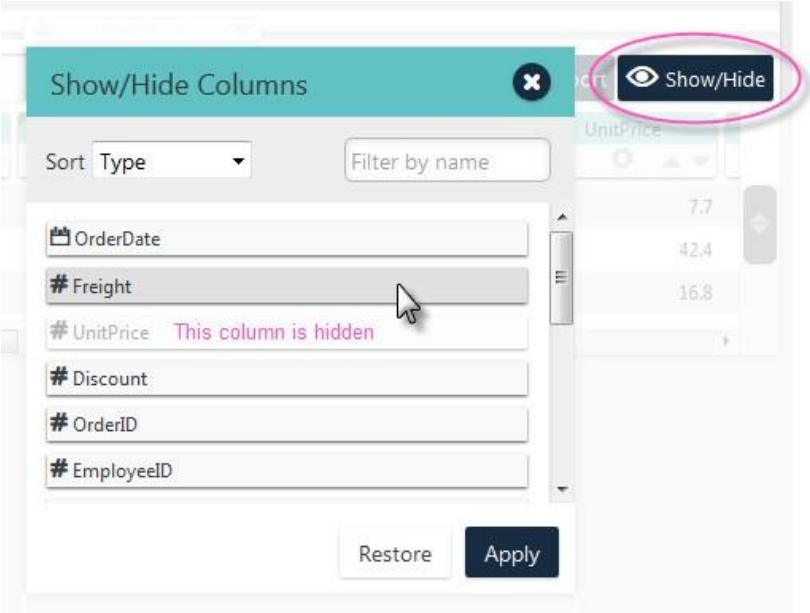
Color-Coded Data Types

Column pills reflect data types in several ways. For example, in order to make it easy to identify data types, each pill is color-coded, as follows:

Which features are available to the data is dependent on the data type. For example, the default alignment of the data in a column is *Left* for Text and Date/Time data, *Right* for Numeric data. Dates use the *Short Date* (mm/dd/yyyy) format by default and numbers include a thousands separator (nnn,nnn).

Controlling Column Visibility

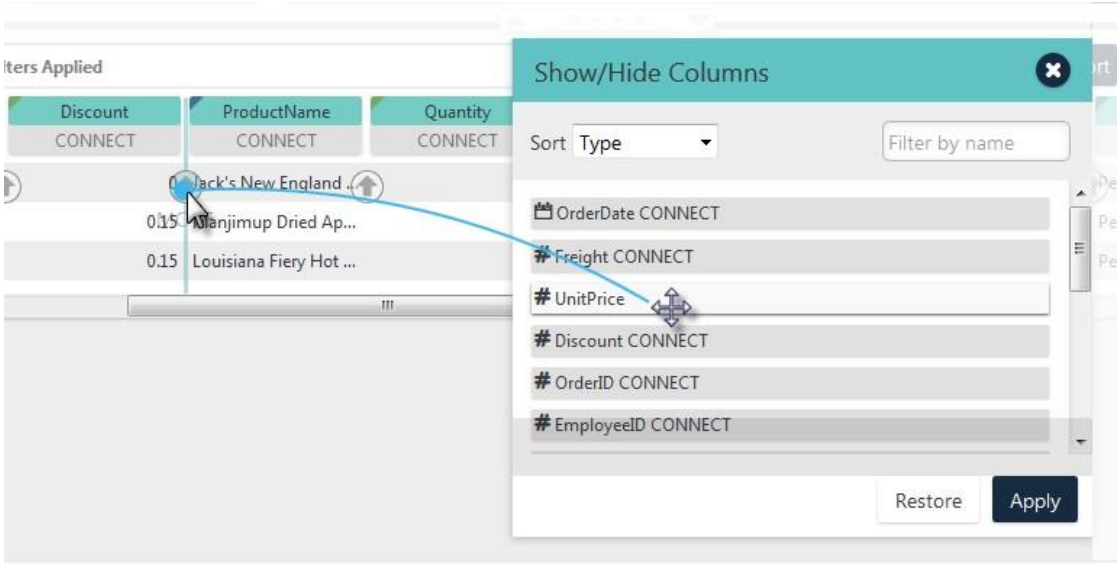
You may want to "hide" certain columns in the data, so they're not displayed in the table.



Click the **Show/Hide** button, circled in the image above, to display the Show/Hide Columns dialog box. You can sort the list of column entries in the dialog box or immediately filter the list by typing in the "Filter by name" text box. Delete any text in this box to redisplay the entire list.

In the dialog box, click one or more column entries to show or hide that column, then click **Apply**. In the example above, the *UnitPrice* column is hidden. Click an entry a second time, followed by Apply, to toggle its visibility. The **Restore** button undoes any changes made.

When you restore or "unhide" a column, it will *not* reappear in its previous place in the table. Instead, it appears at the far right-hand end of the columns (which may not be viewable without scrolling). To move it back to original place, you can move the column using another feature of the dialog box:

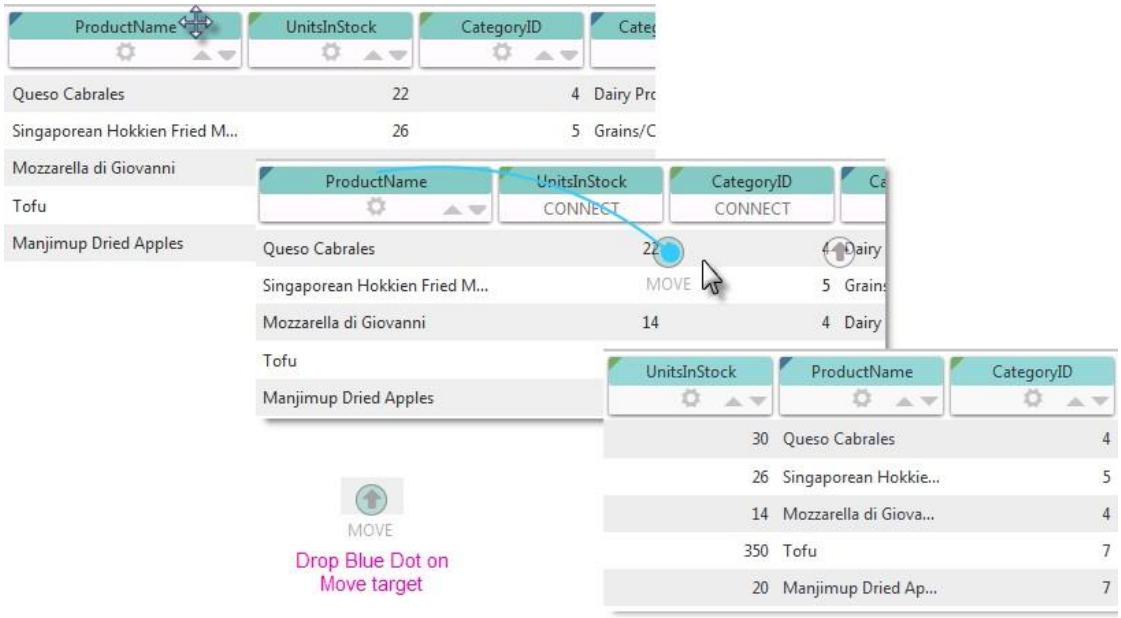


After you restore or unhide a column, click on its entry and use the Blue Dot Connector position it where you want it. In the example above, we're dragging the *UnitPrice* column to a spot between the *Discount* and *ProductName* columns. We'll drop the column on one of the up-arrow "target" icons that appear between columns when you start dragging.

Click the "X" icon to close the dialog box.

Changing Column Order

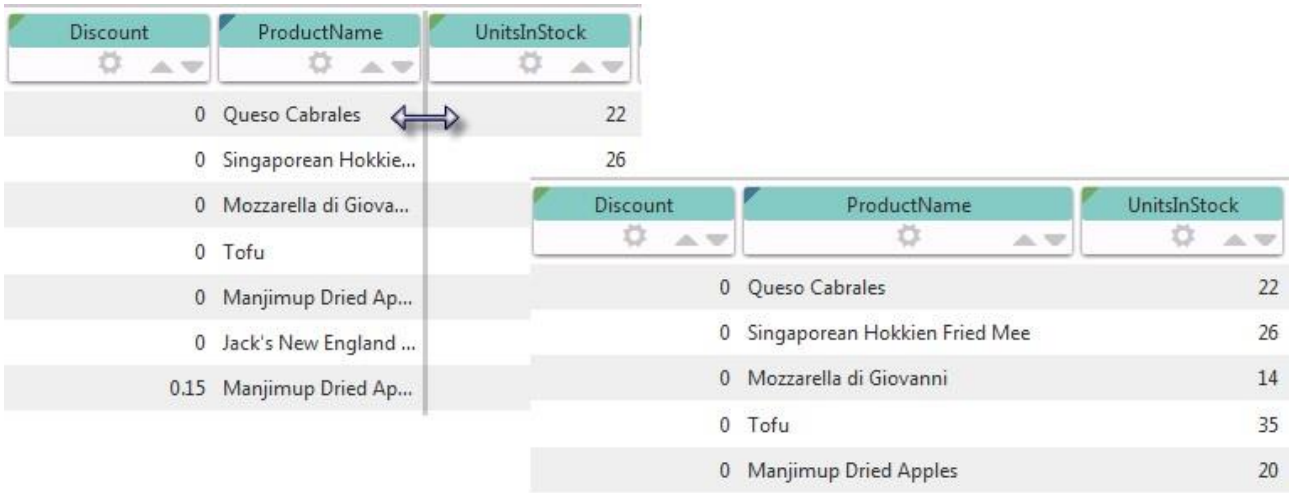
You can also change the order of the columns in the data table by dragging a pill:



To move a column, click on its column pill and drag the Blue Dot Connector out *beneath* the column pills, as shown above. You'll see a "Move target" icon appear between each column. Drop the Blue Dot on a target icon to move the column.

Resizing Columns

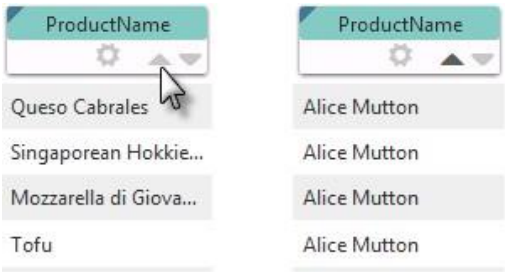
Columns can be resized by dragging them to the desired width:



Place your cursor in the space between columns, to the right of the column you want to resize. A gray "edge" line and a special cursor will appear, as shown above. Drag this line to the desired width and release it.

Sorting Column Data

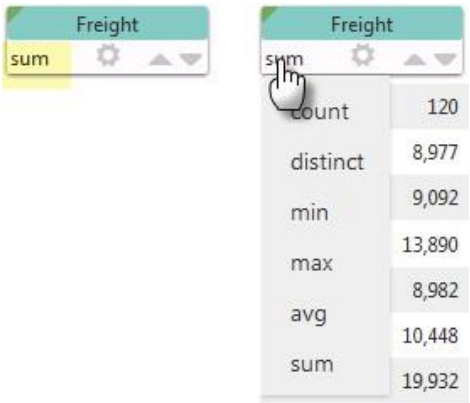
You can sort the data in a column in the table:



Click one of the two gray arrows in the column pill, as shown above, to sort the column in ascending or descending order. The arrow you clicked will darken, becoming an indicator of the sort order selected. Click it again to toggle the sorting *on* or *off*.

Changing Column Aggregation

When the data is grouped on a column, all the other columns are automatically aggregated to get a "best fit" summarization.

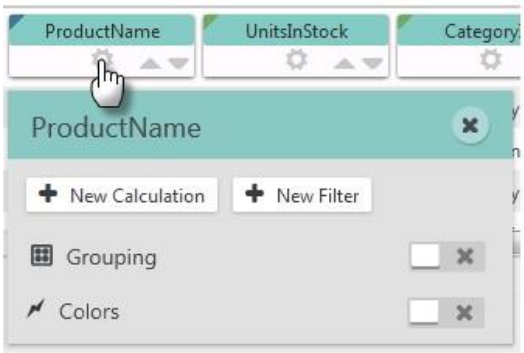


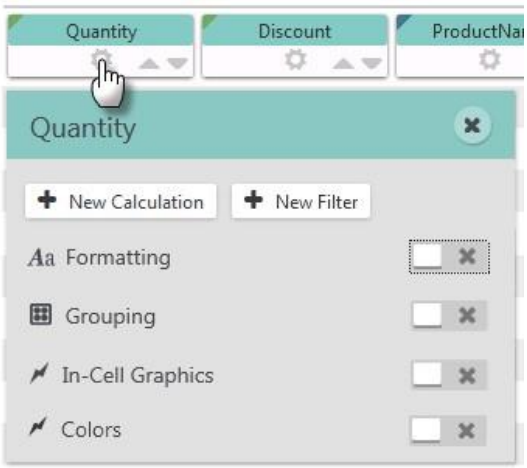
When this happens, each column pill will display the name of the aggregating function that was applied to it. For example, in the image shown above, the grouped data in the Freight column was *summed*. The aggregation automatically applied varies depending on the data type.

However, you can change the aggregation function, if desired, by clicking the function name, as shown above, right. A drop-down list of the aggregation functions available for that data type will appear and you can make a different selection. The data in the table will be updated immediately to reflect the change.

Accessing “Gear Menu” Options

Each column pill has a "Gear" icon and clicking it causes a menu to appear below the pill:





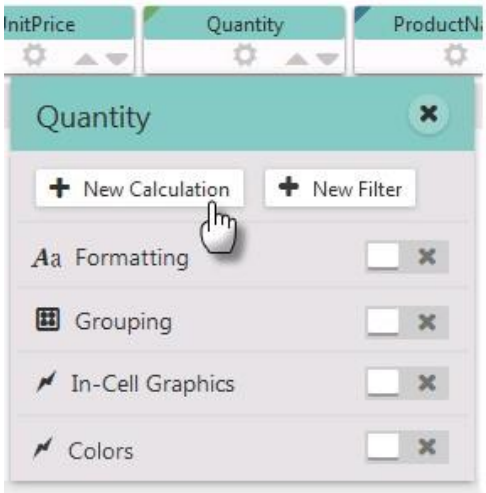
The options available in the menu vary depending on the data type of the column and other factors, as shown above.

Some options can be enabled and disabled, using the sliding Enable/Disable switch.

Each of the menu options is described in detail in the following sections.

Creating and Editing Calculated Columns

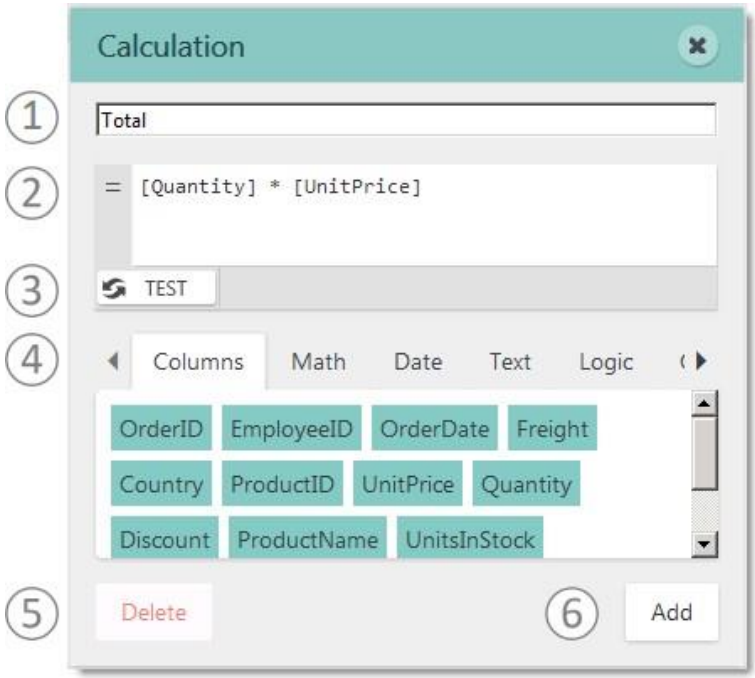
You may want to add new columns to the data which are the result of calculations using existing data. A simple example would be multiplying Quantity values by Unit Price values to obtain a Total. Here's how:



From column pill Gear menu

From Calculated Columns button

Click **New Calculation** on a column's Gear menu, as shown above, or click the **Calculated Columns** button, and the calculation definition panel will appear:



Use this panel to create the expression that will produce your calculated data. The controls are:

1. **Column Name** - Enter your choice for the new column name here. If you used a column's Gear Menu to get here, a new column name (such as "Quantity_calc") will be suggested.
2. **Expression** - Create your formula here. You can use column names, functions, etc. from below by selecting them (thus avoiding typos) but you'll need to enter basic math operators (+, -, *, /) manually. See the important information below about expressions.

3. **Test** - Click this button to test your formula. A valid formula will produce this PREVIEW 168 success indicator. However, if you see the INVALID warning, hover your cursor over it to see a tooltip describing the problem.
4. **Formula Parts** - Hover over an object here see its syntax and a brief description. Click it to insert it into your formula. Left and right arrows let you scroll through several categories of objects and functions.
5. **Delete** - Click this to delete an existing calculated column.
6. **Add** - Click this to add the new calculated column to the data table. The sliding Enable/Disable switch can be used to turn formatting on and off.

About Expressions

The expression editor has wizard-like features that help you reference functions, columns, etc. easily and avoid errors. The expression syntax must conform to the SQL syntax rules for **PostgreSQL**. The functions shown in the Calculation panel are not exhaustive - other PostgreSQL functions may be used. For more detailed syntax information, refer to the *PostgreSQL Reference Manual*. When in doubt, use the **Test** button to validate your expression.

Here's some general information about Thinkspace expressions:

Column References - All column name references must be enclosed in square brackets (e.g. *[column name]*). If you select a column from the list, the editor will automatically add the square brackets to the column reference. If you're typing the formula in directly, typing a "[" will cause the editor to show a list of valid column names for you to select from.

Null Values - By default Null data values are considered when grouping on the column but ignored for any aggregations or charts. If you wish to have Null values counted, they must be converted to a real value (e.g. "N/A", 0, -1, "Unknown") in your expression. For example, to represent Null values as a real value, you could use: `IFNULL ([column], 'N/A')` in your expression. The IFNULL function can be found in the "Logical" functions category. When the calculated column resulting from this expression is used, it will behave like other columns of the same data type and be included in grouping, aggregations, and charts.

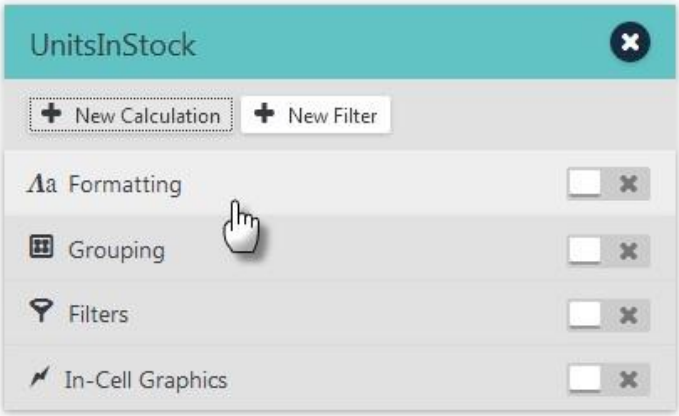
Editing a Calculated Column

A Calculated Column's Gear Menu will include an **Edit Calculation** item:

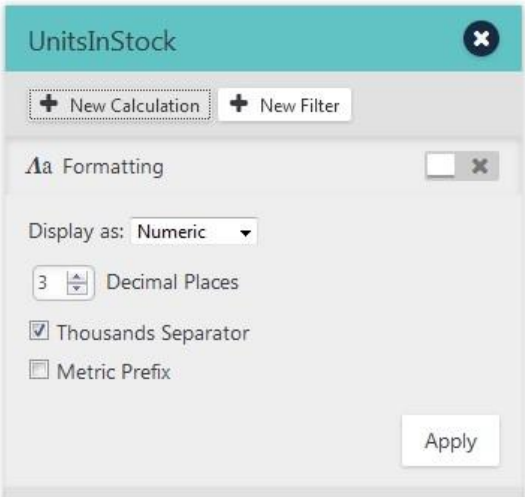
Click the menu item, shown above, to re-open the calculation definition panel and edit the calculation.

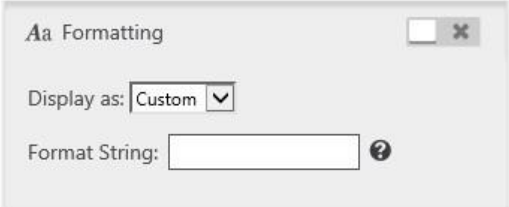
Formatting Columns

You may want to control the display format of column data. Here's how:



Click **Formatting** on a column's Gear Menu, as shown above, and the menu option will expand to show formatting controls:





The formatting controls that appear are dependent on the column data type. There are no formatting controls for Text-type columns (but the data is left-justified by default). Numeric-type columns present the controls shown above left, which allow generic formatting of numbers.

However, if you'd like to apply customized formatting of numbers, you can select the Custom format option. It provides an option to enter a formatting string or mask. For example, enter "$" to prepend the number with a dollar sign, or "%" to display it as a percentage. More information about specific formatting characters is available by clicking the “?” icon.

Click **Apply** to reformat the column immediately. The sliding Enable/Disable switch can be used to turn formatting on and off.

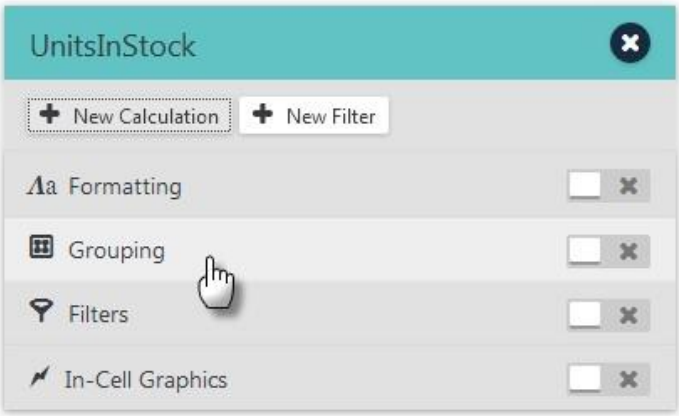
Grouping Rows

The Thinkspace uses a proprietary data analysis technique to automatically group continuous data into various categories, called "bins". The key elements to the data “binning" process are:

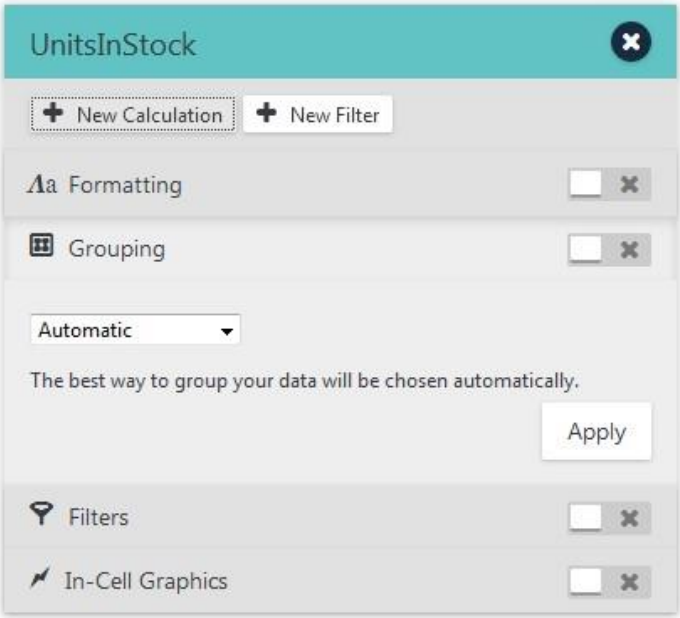
- The actual distribution of the data.
- Ensuring a reasonable chart is generated.
- Producing a "human friendly" distribution.

You'll notice that data is already grouped and summarized when it's used in charts.

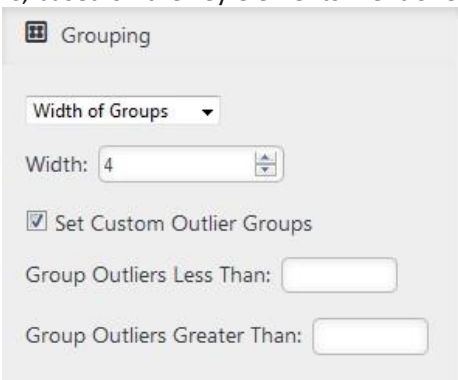
However, you may want to customize the grouping parameters. For Text-type data columns, you'll only be able to enable or disable Grouping, using the sliding Enable/Disable switch. For other columns of other data types, here's how to customize grouping:

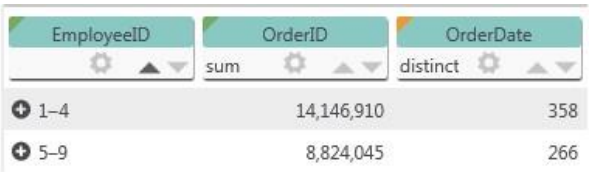


Click **Grouping** on a column's Gear Menu, as shown above, and the menu option will expand to show a panel with the grouping controls. The drop-down list allows you to select the grouping method to be used. Options include:



- *Automatic* - The "best fit" grouping model for the data will be applied automatically, using a default number of bins, based on the key elements mentioned earlier.

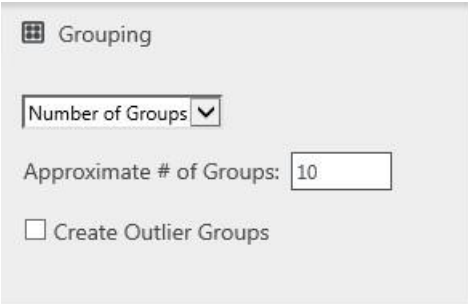




- *Width of Groups* - This option allows you to specify an *approximate* number of groupings. This will be an approximate number because the Thinkspace may be required to create outliers or a number of groups that break the data into human-friendly endpoints.

  In the example shown above, the approximate number of groups was set to "10". In reality, this only produced nine data groupings.

  Note that the grouped rows are retained and you can view them by clicking the "+" icon in the table.

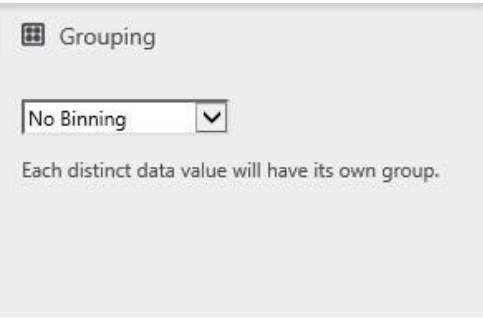


OrderID	EmployeeID count	OrderDate distinct
10,200–10,300	140	47
10,300–10,400	265	82
10,400–10,500	259	70
10,500–10,600	267	70
10,600–10,700	258	62
10,700–10,800	254	56
10,800–10,900	259	41
10,900–11,000	238	31
11,000–11,100	215	23

- *Number of Groups* - This option allows you to specify an *approximate* number of groupings. This will be an approximate number because the Thinkspace may be required to create outliers or a number of groups that break the data into human-friendly endpoints.

  In the example shown above, the approximate number of groups was set to "10". In reality, this only produced nine data groupings.

  Note that the grouped rows are retained and you can view them by clicking the "+" icon in the table.



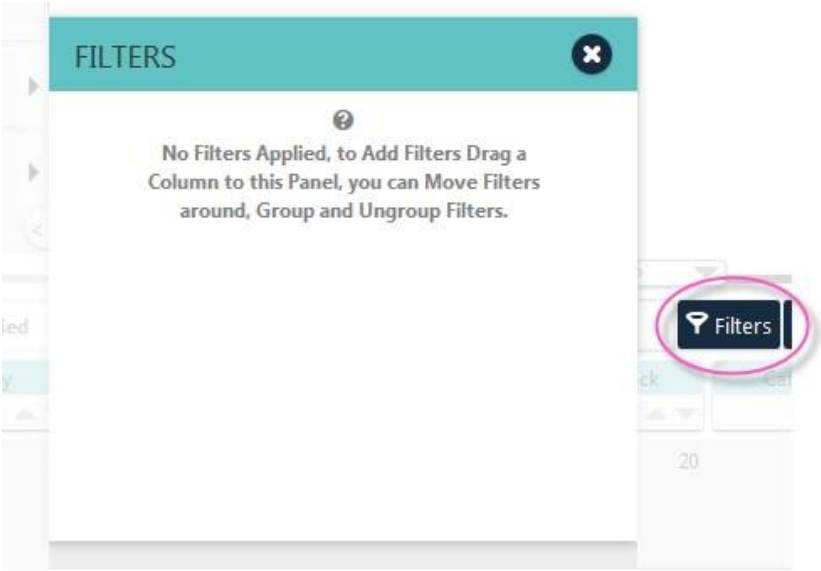
EmployeeID	OrderID count	OrderDate distinct
1	345	111
2	241	90
3	321	115
4	420	141
5	117	40
6	168	66

- *No Binning* - This option disables the automatic binning features and simply creates a group for each distinct data value. Note that the grouped rows are retained and you can view them by clicking the "+" icon in the table.

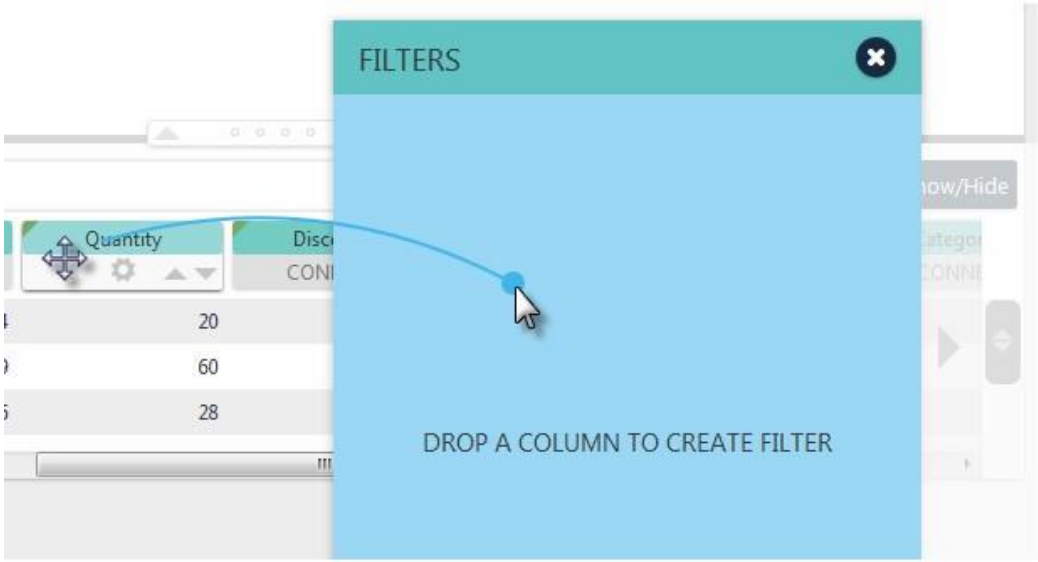
Click **Apply** to group the data immediately. The sliding Enable/Disable switch can be used to turn Grouping on and off.

Filtering Rows

The data used in your analysis can be filtered to remove unwanted data. This is done by setting filter criteria based on column values, resulting in rows matching the criteria being "removed" from the data (the data is hidden, not actually deleted).

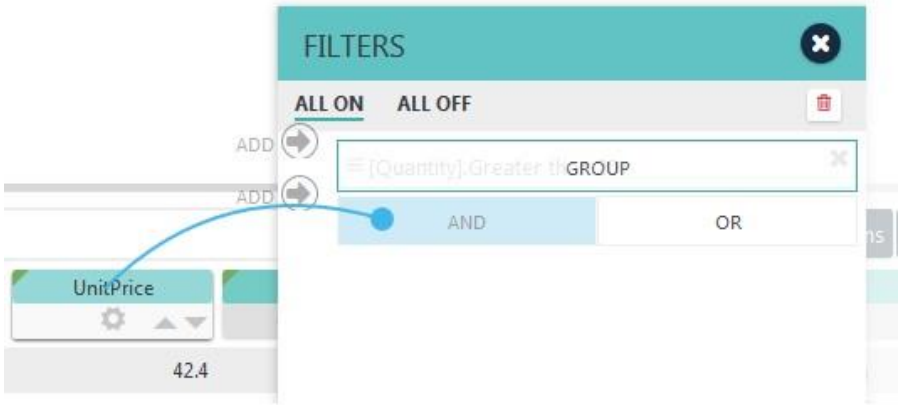


Filter configuration can be initiated by clicking the **Filters** buttons just above the data table. A panel, shown above, will open as a drop zone for the pills of columns to be filtered..

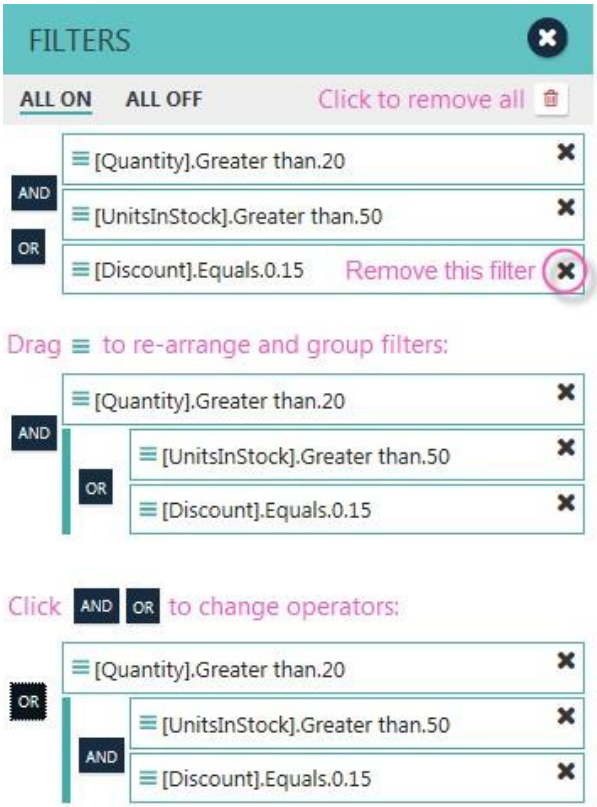


Drag and drop a column pill into the zone to create a filter on that column, as shown above.

As you create filters, they'll appear in both in a list in the area just above the left-hand end of the data table, shown above left, and in the Filters panel, shown above right.



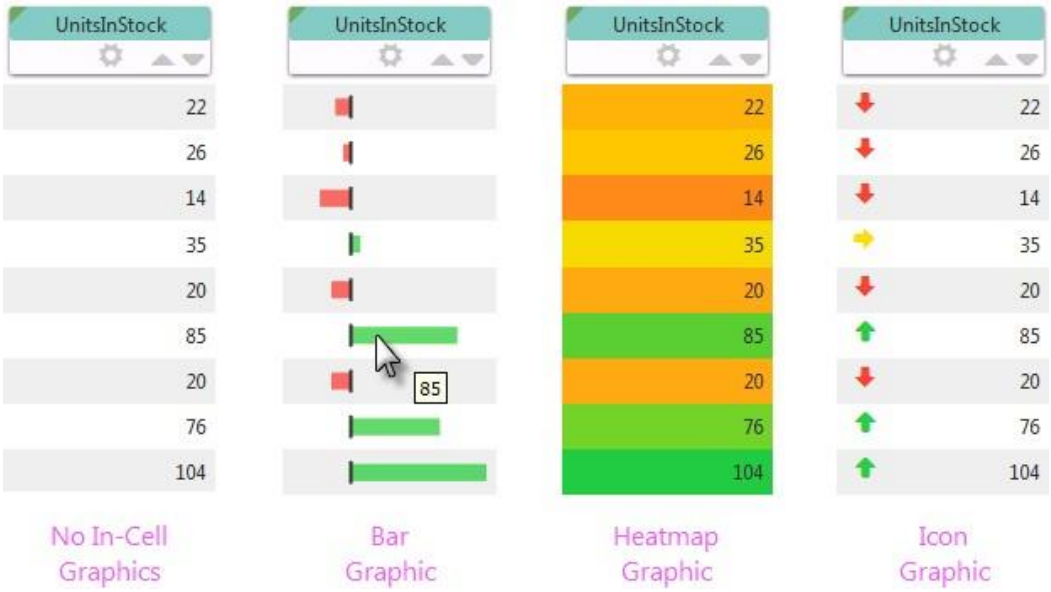
To create additional filters, drag additional column pills into the Filters panel and, as shown above, drop them on the AND or OR blocks.



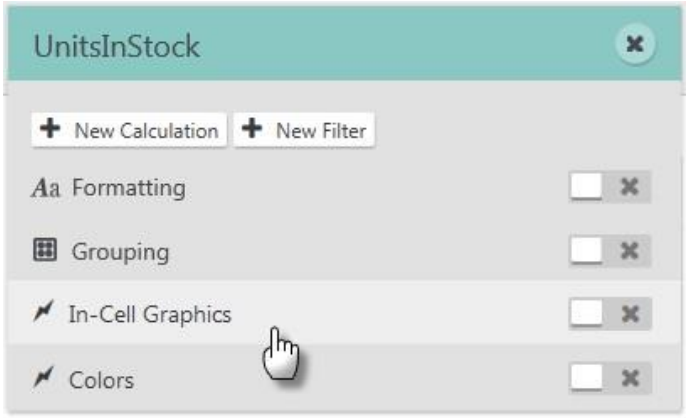
Filters can be re-arranged, grouped, and combined using the controls in the Filters panel, as shown above. Filters can be removed by clicking their "X" icon. Filters can be enabled or disabled *en masse* using the links at the top of the panel, or can all be removed at once using the Remove All icon.

Adding In-Cell Graphics

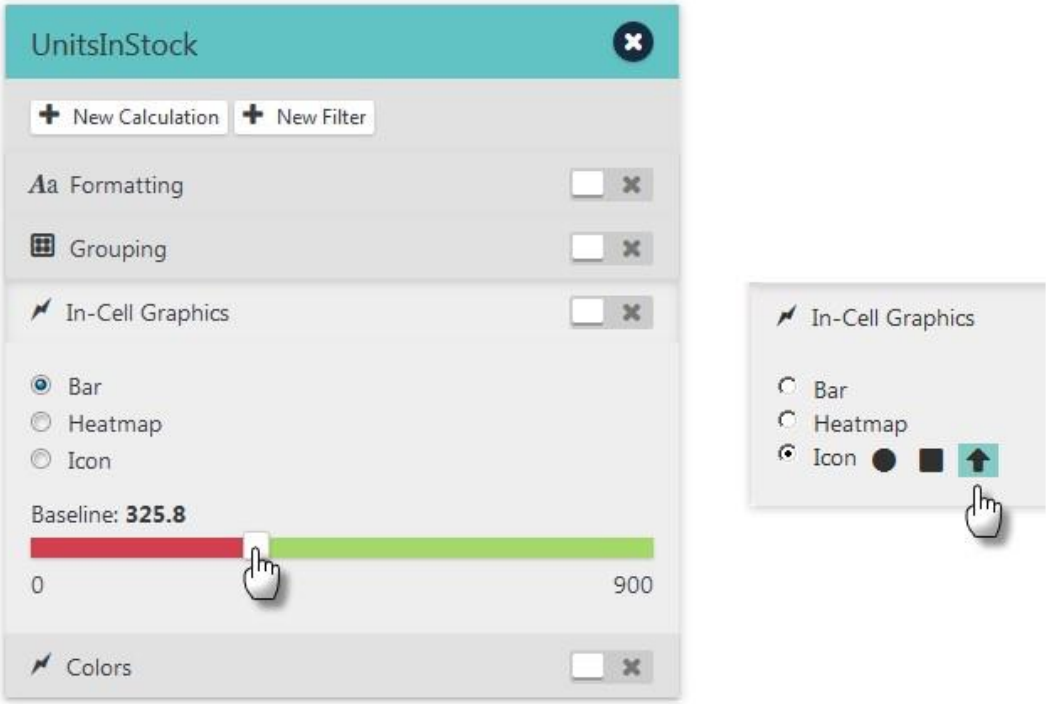
Number-type data table columns can include "In-Cell" graphics to make it easier to understand values and compare them at-a-glance:



The available In-Cell graphics are shown above. The Icon graphic can consist of arrows, circles, or squares. Here's how to use these graphics:



Click **In-Cell Graphics** on a Number column's Gear menu, as shown above, and the menu option will expand to show a panel of options:



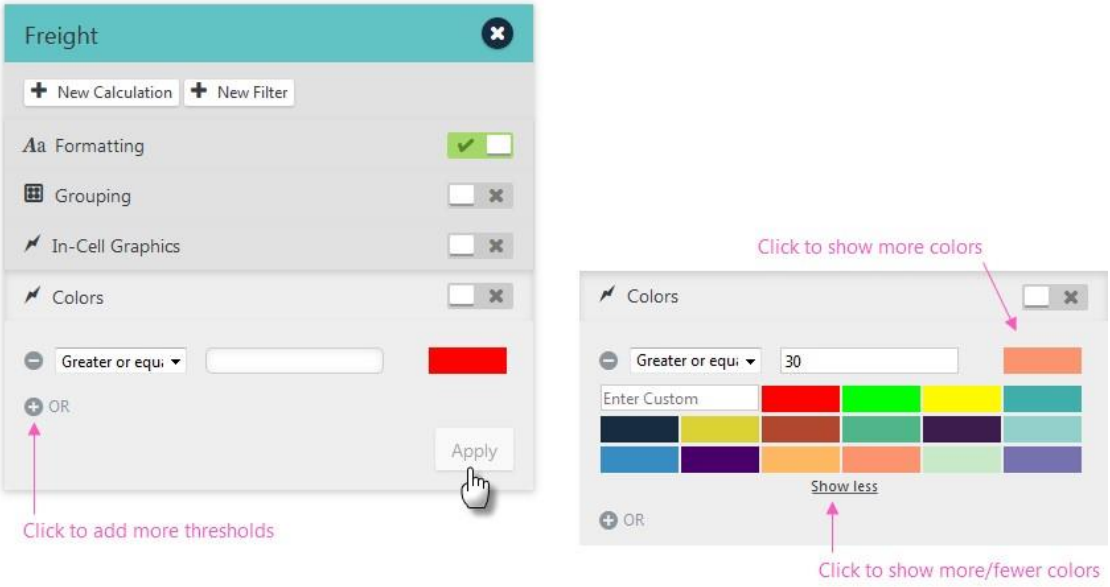
The *Bar* and *Heatmap* options present a Baseline slider, which lets you specify a baseline value for the graphic.

The *Icon* option provides three graphic options: Circle, Square, and Arrow. Icon values, which determine colors and arrow icon direction, are evenly distributed in percentage thirds (less than 33%, 33% to 66%, greater than 66%).

Click **Apply** to immediately display the graphics. The sliding Enable/Disable switch can be used to turn In-Cell graphics on and off.

Setting Color Thresholds

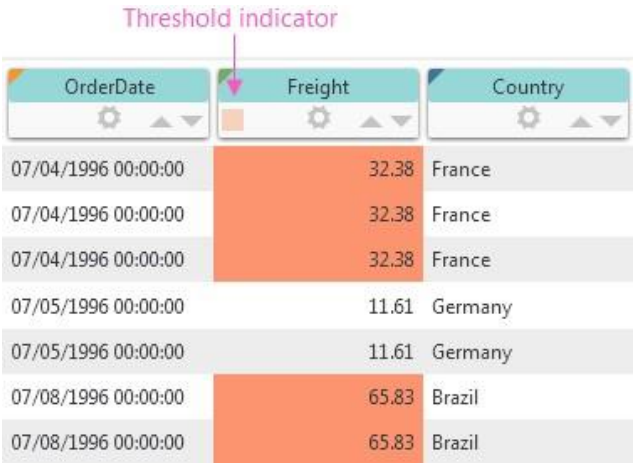
You can set another type of in-cell graphic by coloring column cells based on data value thresholds. Click **Colors** on a column's Gear menu:



Using the Colors controls, select a comparison operator, enter a comparison value, and select a color, as shown above.

Click the color swatch to show more colors and the *Show more* link to show additional colors. You can also enter color values directly as hex ("#CCCCCC"), RGB ("rgb(197, 95, 169)"), or text ("Blue") values.

Click the icons to add or remove thresholds. Click **Apply** to immediately apply the thresholds.

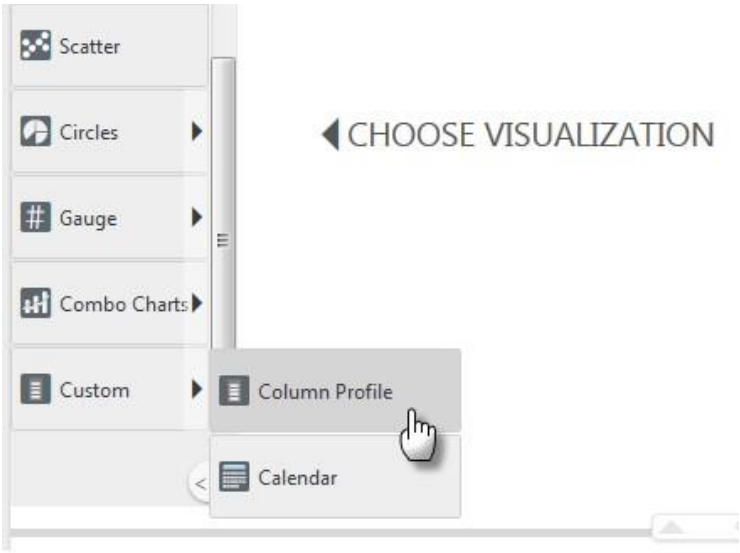


The resulting chart, with just one threshold defined, will look similar to the one shown above. Note that the column pill has a colored threshold indicator displayed now.

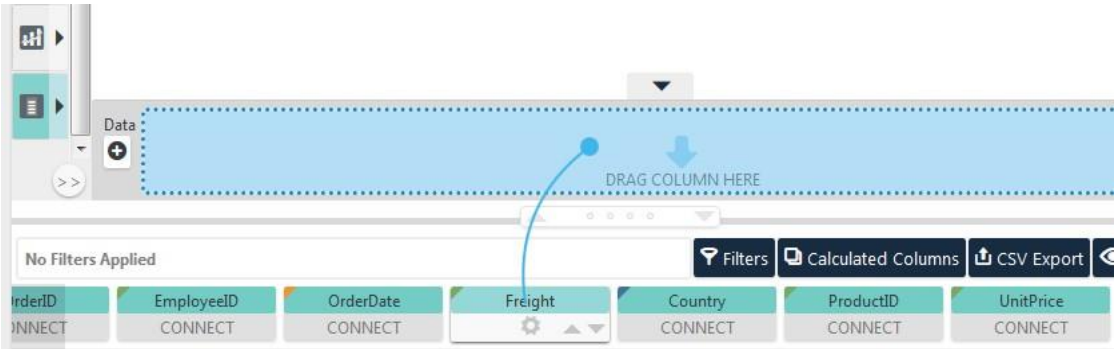
Profiling a Column

The Thinkspace also lets you "profile" a data table column. A column profile displays statistics, such as minimum, maximum, average, and average for Numeric columns, and minimum and maximum for DateTime columns. It

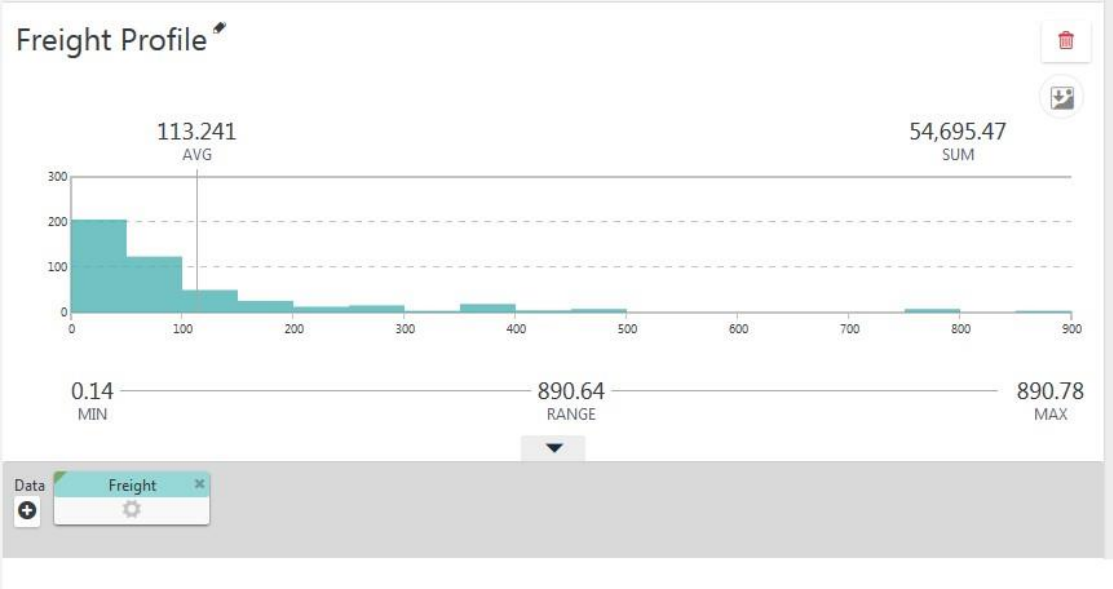
can also help you identify problems in your data such as invalid dates, such as a maximum date that's in the future.



To create a column profile, start with a clear Thinkspace and scroll down in the Visualizations menu, as shown above, and select Custom → Column Profile.



Drag-and-drop a Numeric column pill, like *Freight*, into the blue drop zone, as shown above.

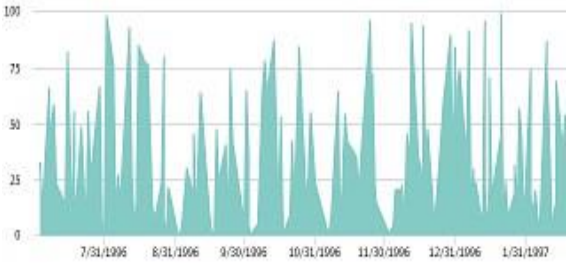


The column profile will be displayed, as shown above. The profile for the *Freight* column includes minimum, maximum, average, and sum statistics. The statistics for other columns will vary, depending on column data type.

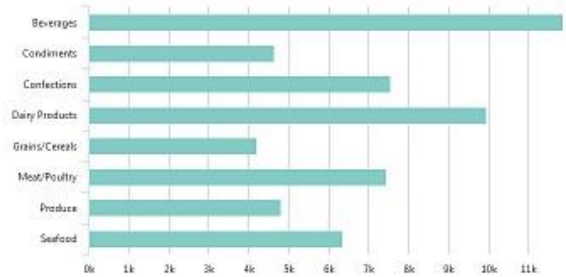
Replace the *Freight* column pill with the *OrderDate* pill and you can see the differences, shown above.

Working with Charts

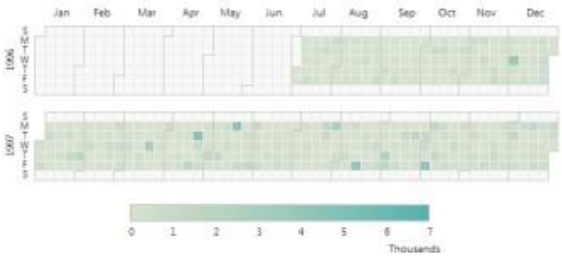
The Thinkspace is capable of producing a variety of charts and the following table shows an example of each one, with a brief description:



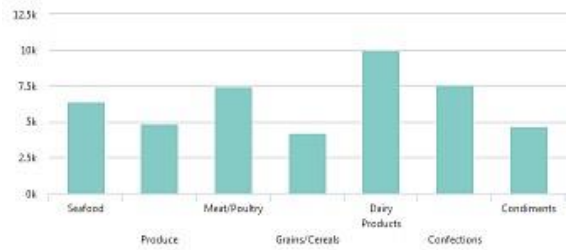
An **Area** chart is similar to a Line chart. However, the area between axis and line are commonly filled-in and emphasized with colors, textures, or cross-hatchings. Typically, this chart is used to compare two or more quantities.



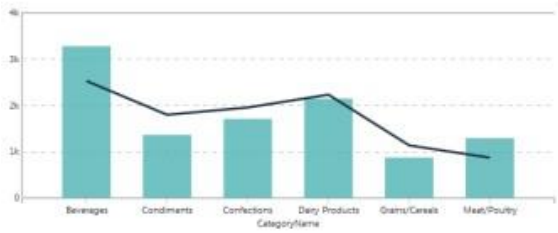
A **Bar** chart presents grouped data as horizontal rectangular bars, with bar lengths proportional to the values that they represent. It's most commonly used to show comparisons among categories. The Y-axis of the chart shows the specific categories being compared, and the X-axis represents discrete values. Values from multiple series may be "stacked" one atop the other, or grouped side-by-side.



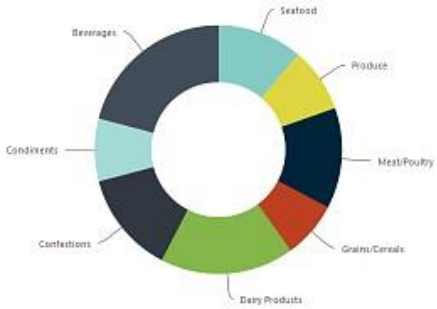
A **Calendar** chart is a Heatmap-style visualization of time-series data. It uses color gradients to show how data varies over a span of time and can be useful for discovering correlations between events and specific days.



A **Column** chart presents grouped data as vertical rectangular bars, with bar lengths proportional to the values that they represent. Its most commonly used to show comparisons among categories. The X-axis of the chart shows the specific categories being compared, and the Y-axis represents discrete values. Values from multiple series may be "stacked" one atop the other, or grouped side-by-side.

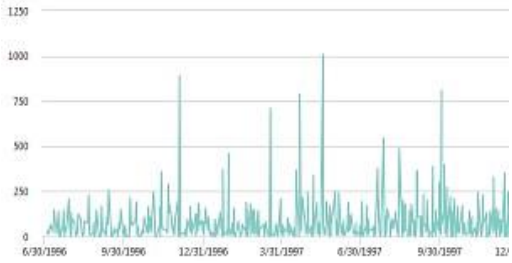


A **Combo** chart displays multiple data series in overlapping chart styles, making it easy to compare values for different columns or values. A Column + Line chart is shown in the image at left. A secondary axis can also be displayed.

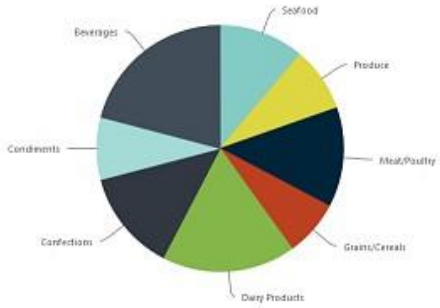


A **Donut** chart is related the Pie chart, however its center is a "hole", providing a different look. It's divided into slices to illustrate numerical proportion, and the arc length of each slice is proportional to the quantity it represents

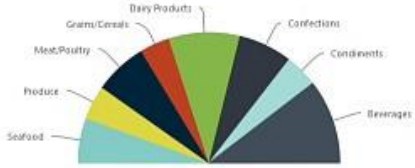
A **Semi-Donut** chart is similar to the Donut chart, but limits itself to one-half of a circle. It's divided into slices to illustrate numerical proportion, and the arc length of each slice is proportional to the quantity it represents.



A **Line** chart displays information as a series of data points connected by straight line segments. It's a basic type of chart common in many fields. It is similar to a scatter plot except that the measurement points are ordered (typically by their x-axis value) and joined with
straight line segments. A line chart is often used to visualize a trend in data over intervals of time – a Time series – and so the line is often drawn chronologically.

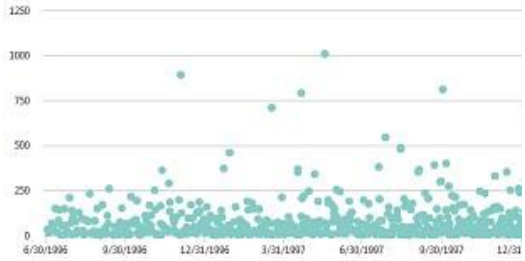


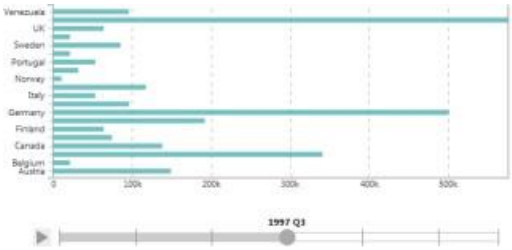
A **Pie** chart is a circular statistical graphic, which is divided into slices to illustrate numerical proportion. In a pie chart, the arc length of each slice is proportional to the quantity it represents.



A **Semi-Pie** chart is similar to the Pie chart, but limits itself to one-half of a circle. It's divided into slices to illustrate numerical proportion, and the arc length of each slice is proportional to the quantity it represents

A **Scatter** chart uses Cartesian coordinates to display values for several data sets. The data is displayed as a collection of points, each having the value of one variable determining the position on the horizontal axis and the value of the other variable determining the position on the vertical axis.

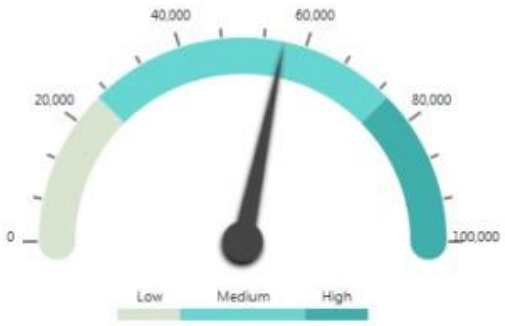




The animated **Timeline** displays snapshots of the data based on time intervals, in an automatically-updated chart. Like a video, it can be started and stopped at various points in time so that the resulting chart can be examined.

An **Arc Gauge** is most useful for showing an aggregation of values in a single column. It displays a fixed numeric value with an indicator depicting progress towards a maximum value. The color of the indicator changes from red, to yellow, to green as the maximum value is approached.

The **Bullet Gauge** is most useful for visualizing an aggregation of values in a single column. They display information in a more compact and easier-to-read format than circular gauges.



Like the Bullet Gauge, the **Dial Gauge** is most useful for visualizing an aggregation of values in a single column. It does this in an attractive way and it's also a familiar object, given its similarity to those used in automobile dashboards.

A **KPI Gauge**, like the other gauges, is most useful for visualizing an aggregation of values in a single column. It simply displays the aggregated value in a large, clear font, without any other graphic elements

54,695.47

The Thinkspace "recommendation engine" will automatically propose the best chart types for displaying your data, and data point tooltips are generated automatically.

Chart options include filtering the data with a "Crosstab Filter", applying groupings, and showing percentages.

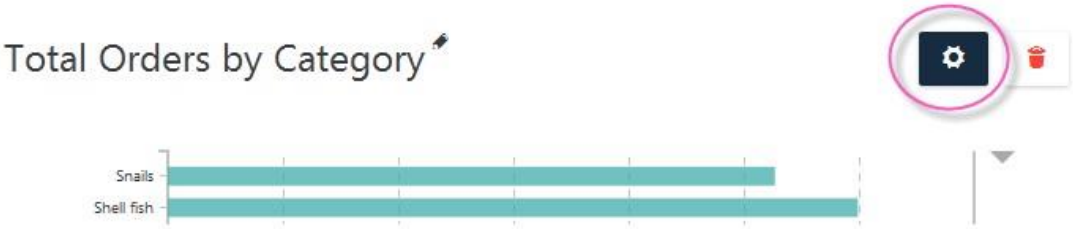
Once you've selected a chart type, you'll almost certainly want to try working with different data, isolating data, and apply modifications. Here are four common, related activities:

Configuring Chart Title and Legend

The Thinkspace automatically provides a title for your chart, but you may want to edit the suggested title.

To change the title, click the Edit icon, shown circled above.

The controls shown above will appear and you can enter your new title. Press Enter to save any changes, or click the icons to save, cancel, or revert the title.

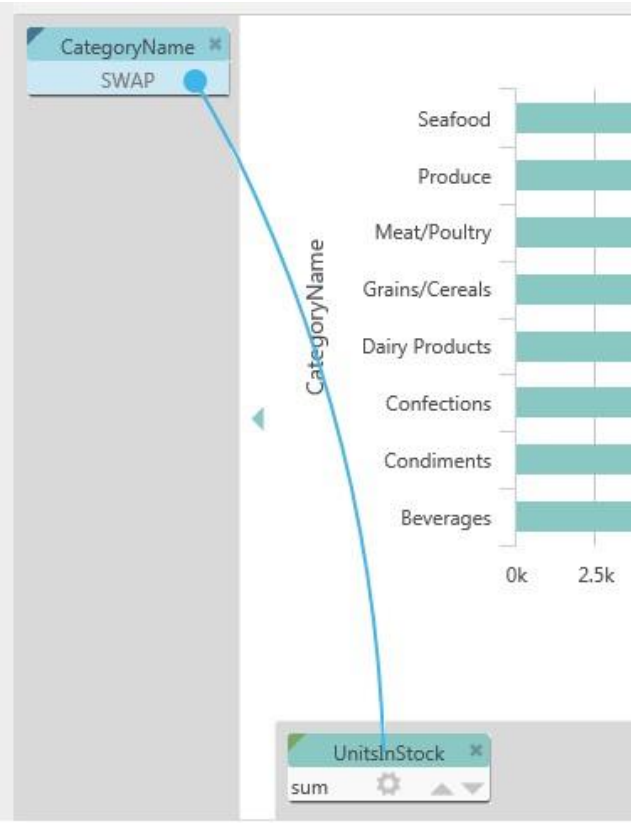


To configure the chart *legend*, click the chart's Gear icon, shown circled above. This opens the Visualization Settings panel:

In the panel, shown above, you can select the legend location or disable (hide) it entirely. If the controls are not visible, click the "Legend" caption to expand the panel and make them visible.

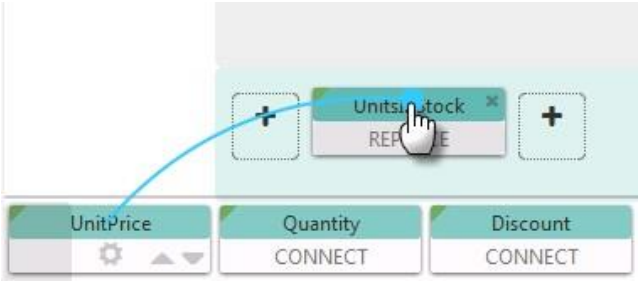
Swapping Axis Columns

You may want to swap the X- and Y-axis columns to view the data differently. Here's how



Just drag-and-drop the Blue Dot Connecter from one axis pill to another, as shown above.

If you want to entirely *replace* a column you previously selected to create the chart, it's easy to do:

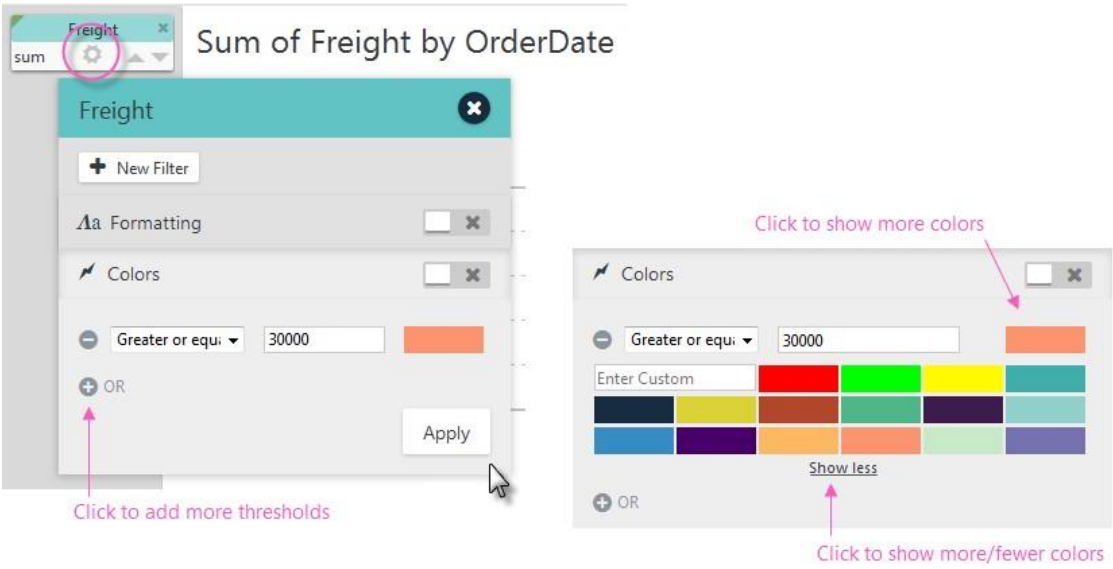


As shown in the example above, to replace a column, just drag another one onto the existing column pill. The word "REPLACE" will appear, then drop the new column. The chart will update immediately.

Don't be surprised if the chart *type* changes when you do this - the Thinkspace will recommend the best chart based on the new data.

Setting Color Thresholds

You can set data value thresholds that are indicated by chart colors. To do this, click a chart's column pill Gear icon and select the **Colors** menu item:



Using the Colors controls, select a comparison operator, enter a comparison value, and select a color, as shown above.

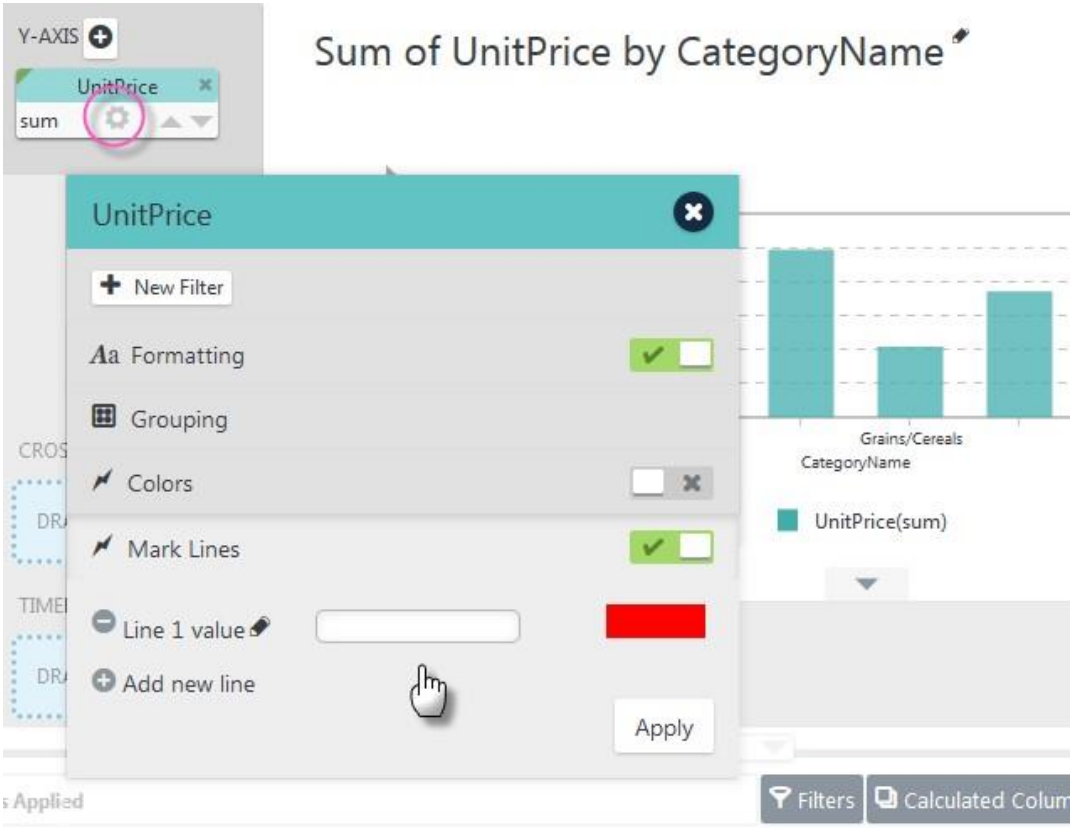
Click the color swatch to show more colors and the *Show more* link to show additional colors. You can also enter color values directly as hex ("#CCCCCC"), RGB ("rgb(197, 95, 169)"), or text ("Blue") values.

Click the icons to add or remove thresholds. Click **Apply** to immediately apply the thresholds.

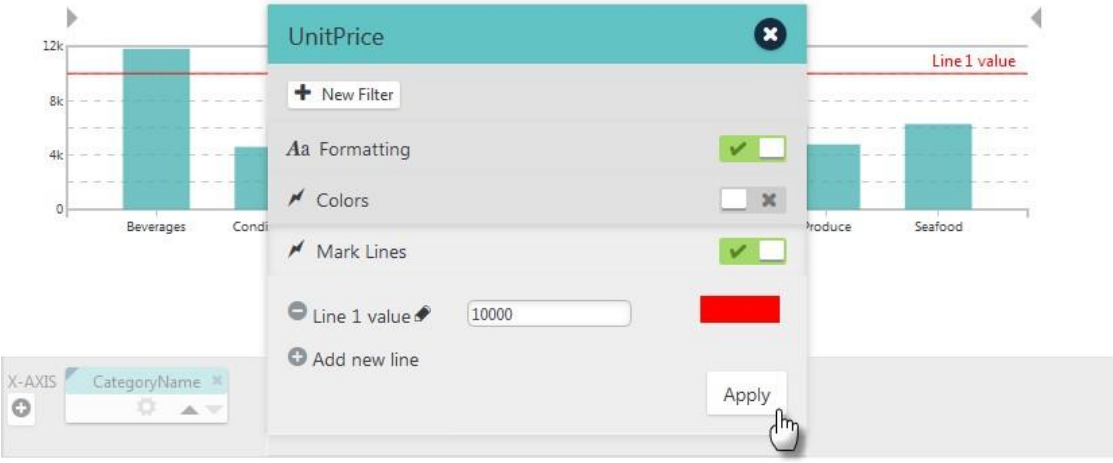
The resulting chart, with just one threshold defined, will look similar to the one shown above. Note that the column pill has a colored threshold indicator displayed now.

Adding Mark Lines

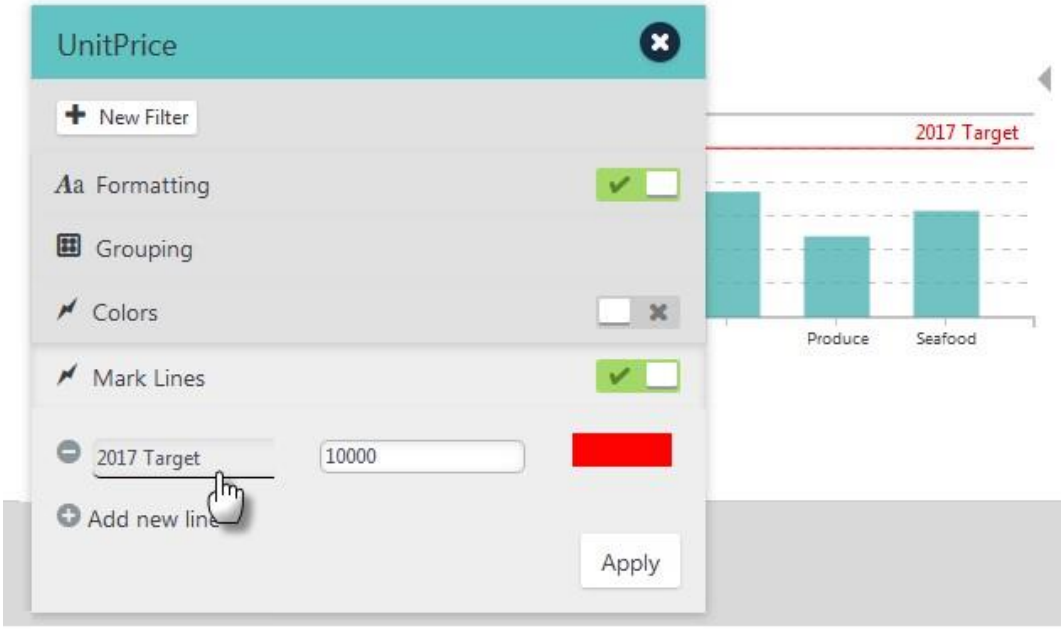
Mark Lines are lines on a chart's canvas, related to its Y-axis data values, making it easy to compare data to target values.



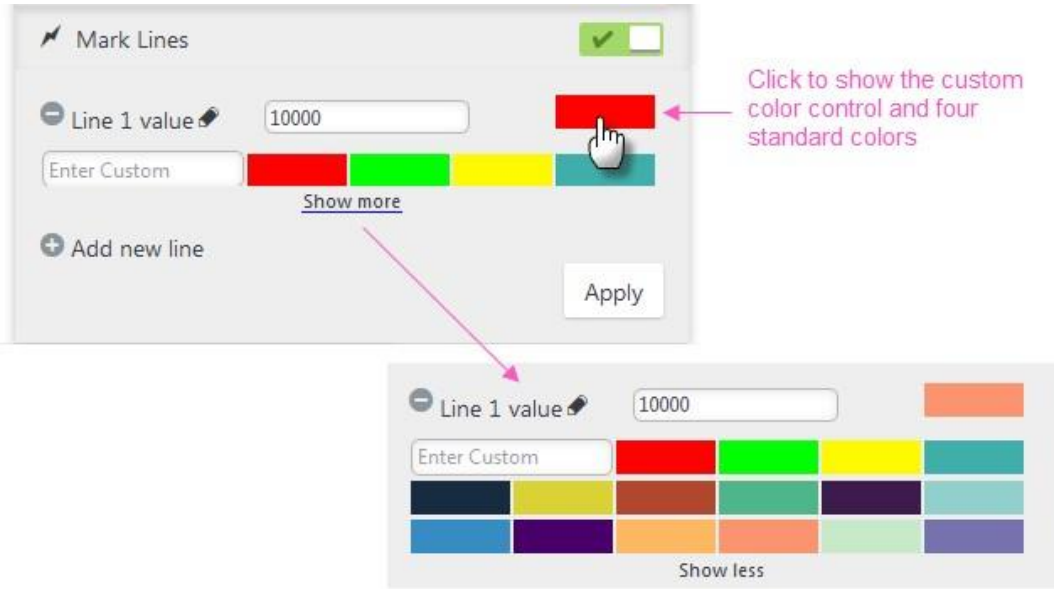
To add Mark Lines, click a Y-Axis pill's Gear icon and select Mark Lines in its Gear menu, as shown above.



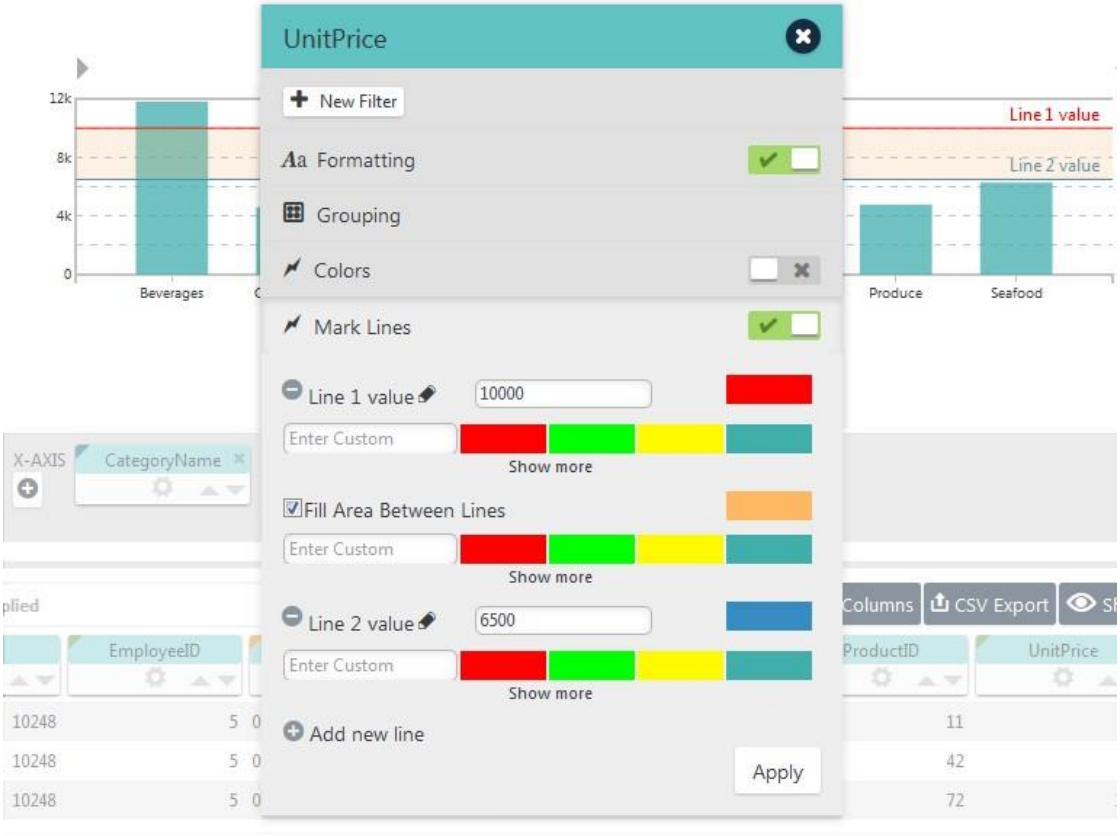
Enter a value for the first line, *10000* in the example above, and click **Apply**. The resulting line and its caption are shown on the chart in the background.



The line's caption can be edited by clicking the "Pencil" editing icon, making changes, and clicking **Apply**, as shown above.



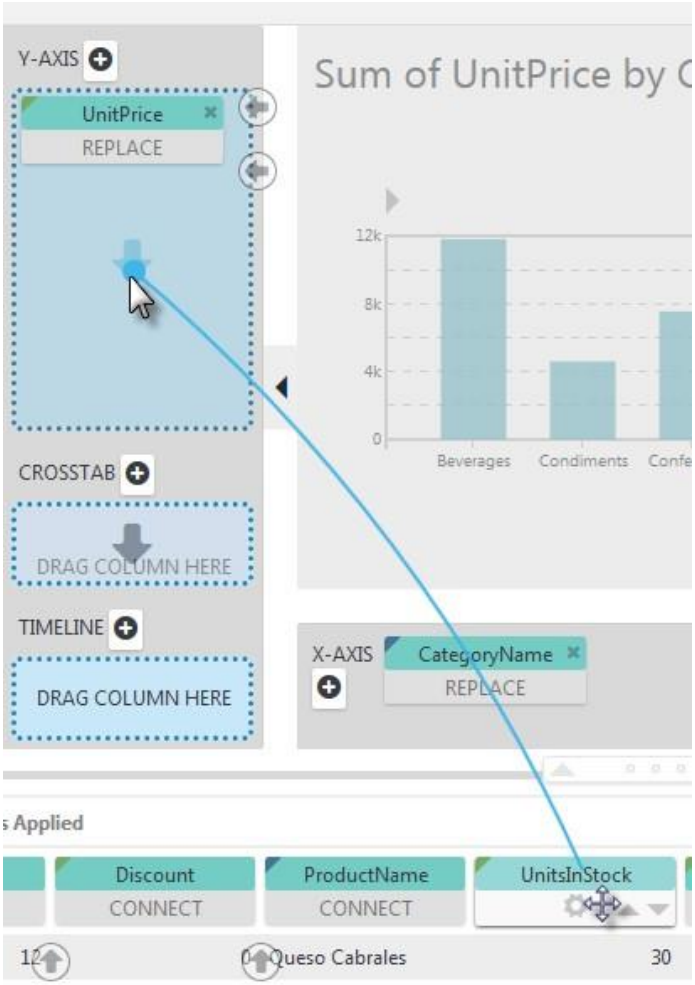
To change the line's color, click the assigned color swatch to show the standard colors and the *Show more* link to show even more colors. You can also enter custom color values directly as hex ("#CCCCCC"), RGB ("rgb(197, 95, 169)"), or text ("Blue") values.



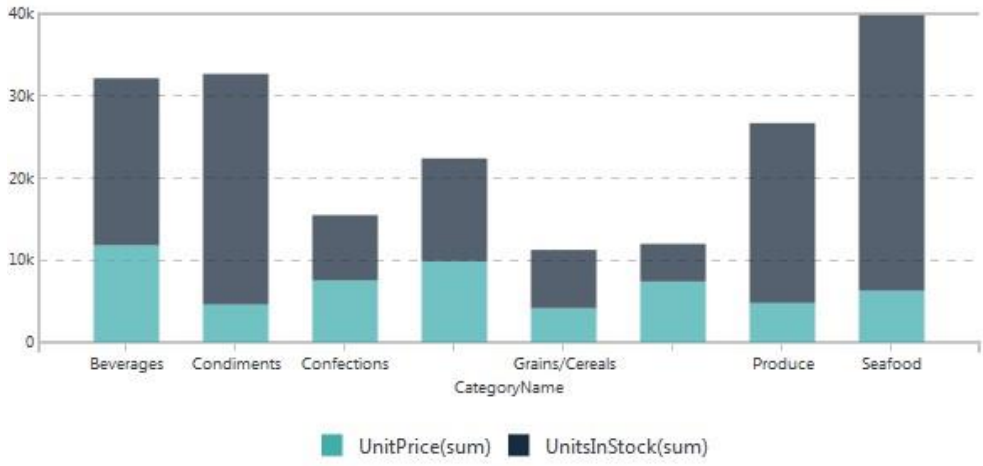
You can add and remove Mark Lines using the icons and even fill the area between them, as shown above.

Adding Another Series

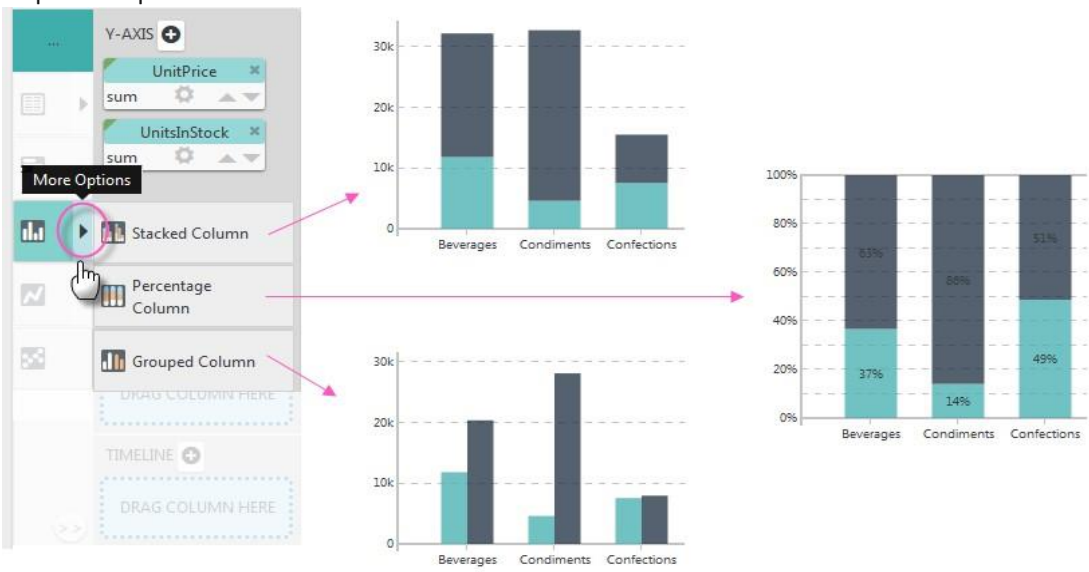
It's often useful to compare several data series on the same chart. In this example, assume we already have a Column chart that shows *UnitPrice* by *CategoryName*, and we want to add *UnitsInStock* to it.



Start by dragging the *UnitsInStock* column pill onto the Y-Axis drop zone, as shown above.



The chart will immediately update, adding the new series by *stacking* its values, as shown above, on the original series. Repeat the process to add more series.

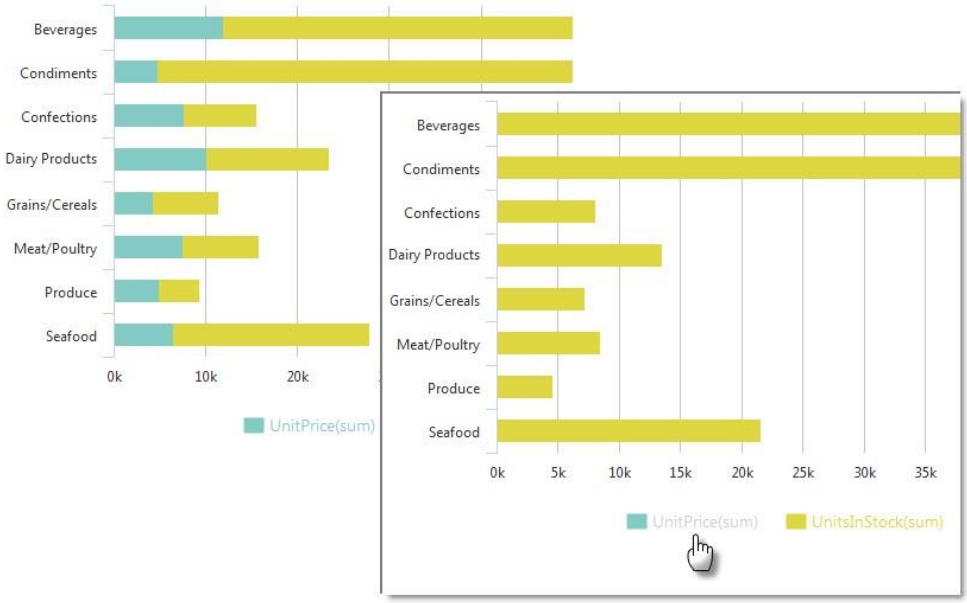


The additional series can be shown as stacked (values), stacked (percentages), or grouped side-by-side. When the second series was added, the option for the selected chart type in the Visualization menu acquired a "More Options" arrow icon, circled above. Click it to see the charting options and select the desired arrangement.

Don't be surprised if the chart *type* changes when you do this - the Thinkspace will recommend the best chart based on the new data - or if the chart *scale* changes.

Using Legend Filtering

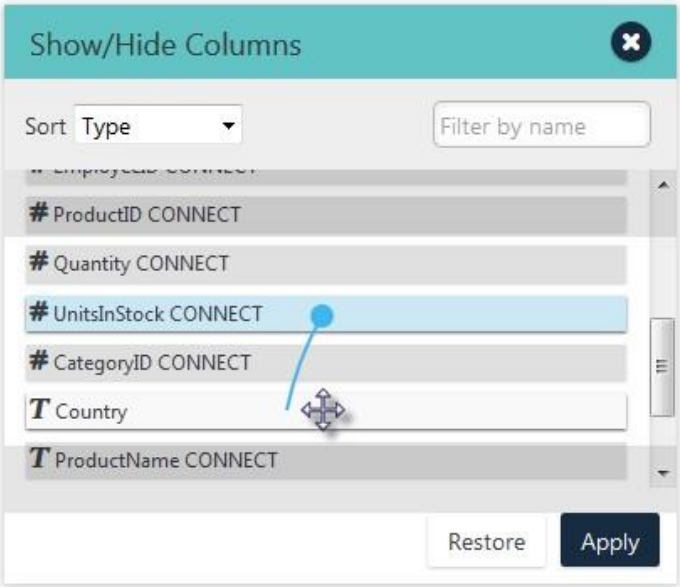
Once you've created a chart with multiple data series, you might want to temporary hide one or more of them to see the other series in isolation.



Click one or more of the legend labels, as shown above, and that data will be temporarily filtered out of the chart. Click again to restore the data.

Using the Blue Dot in the Show/Hide Panel

There's another quick and easy way to select columns to be used in a chart, in the Show/Hide Columns panel:

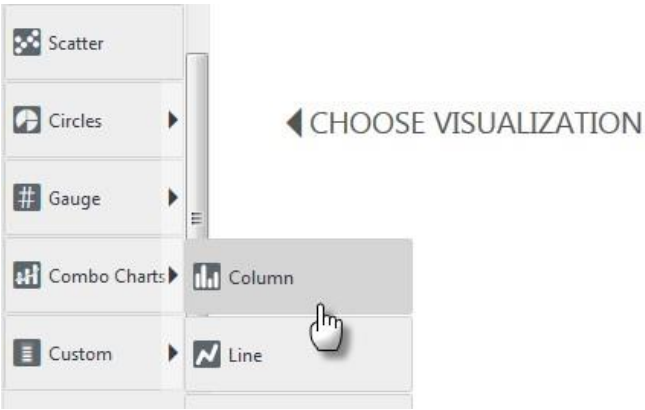


As shown above, open the Show/Hide Columns panel and drag the Blue Dot Connector from one column entry to another. When you drop it, a chart will be created.

This is a useful short cut if you have a lot of columns and don't want to scroll horizontally looking for the right columns to use.

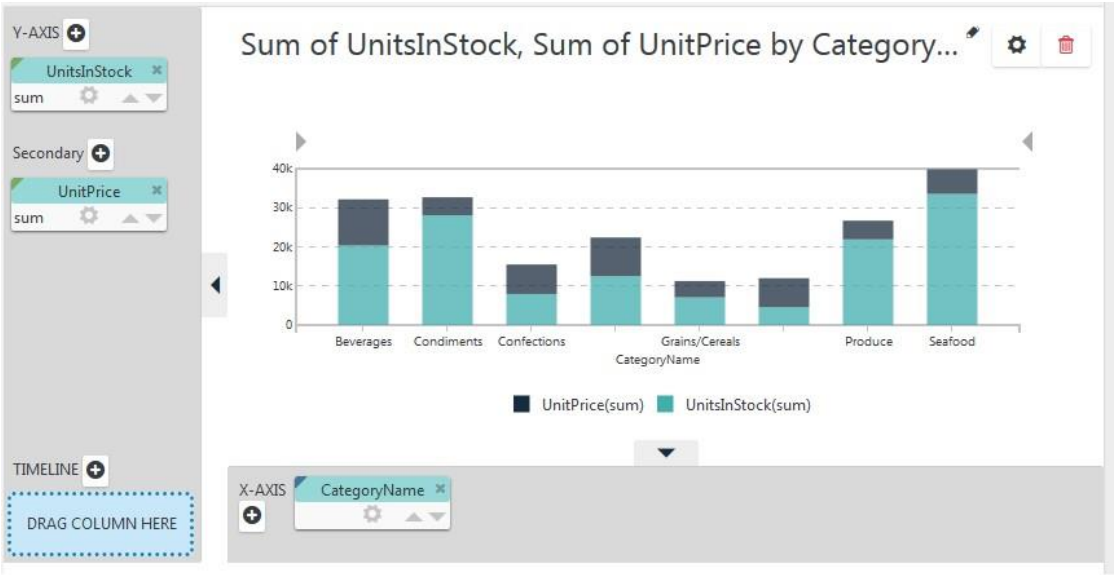
Creating a Combo Chart

A Combo chart allows you combine several chart types, overlaying them, for easier comparison of the data.

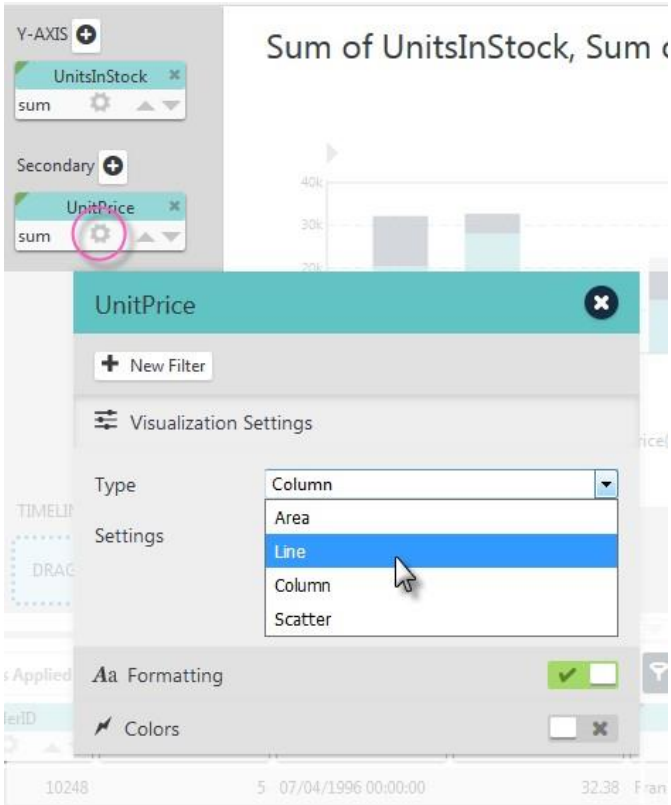


In order to create a Combo chart in the Thinkspace, scroll down in the Visualization menu and select Combo Charts → (base chart type of your choice).

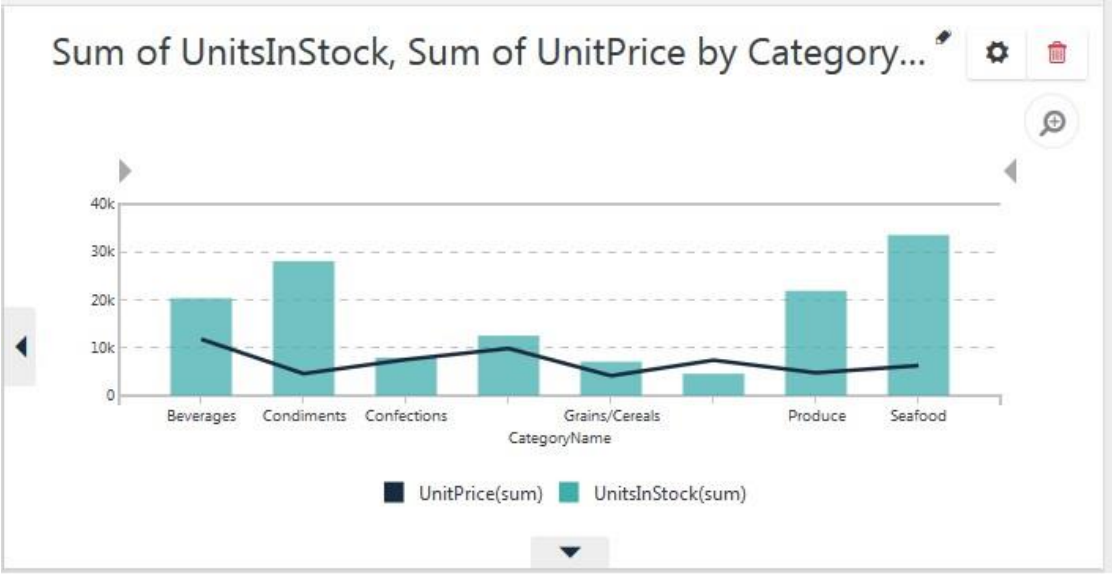
Drag-and-drop the data pills necessary to create the first chart series (in the example above *CategoryName* and *UnitsInStock*). Then drag the pill for your second series (*UnitPrice*) into the Secondary axis drop zone, as shown above.



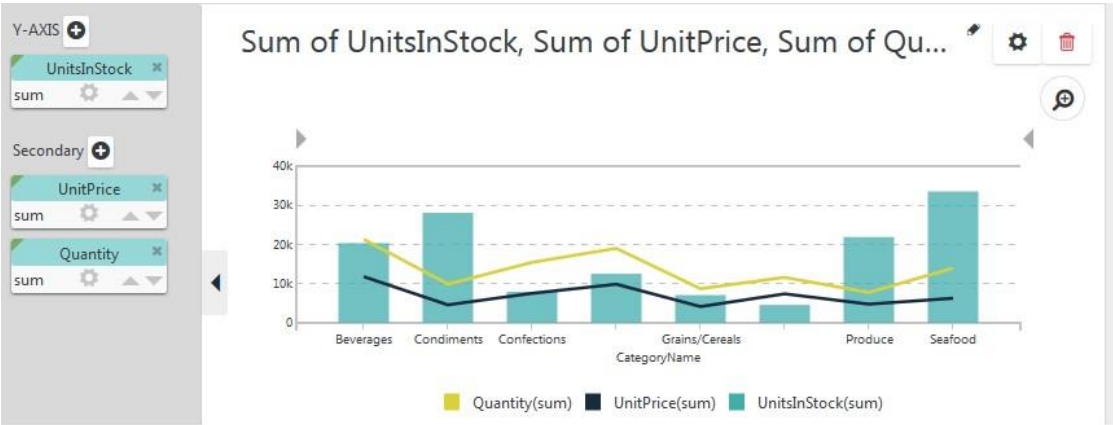
Your chart will be drawn, with the two series stacked, as shown above.



Next, click the Secondary pill's Gear icon and select the Visualization Settings in its Gear menu, as shown above. You can now choose a different chart type for the secondary data. We'll choose a Line chart for this example.



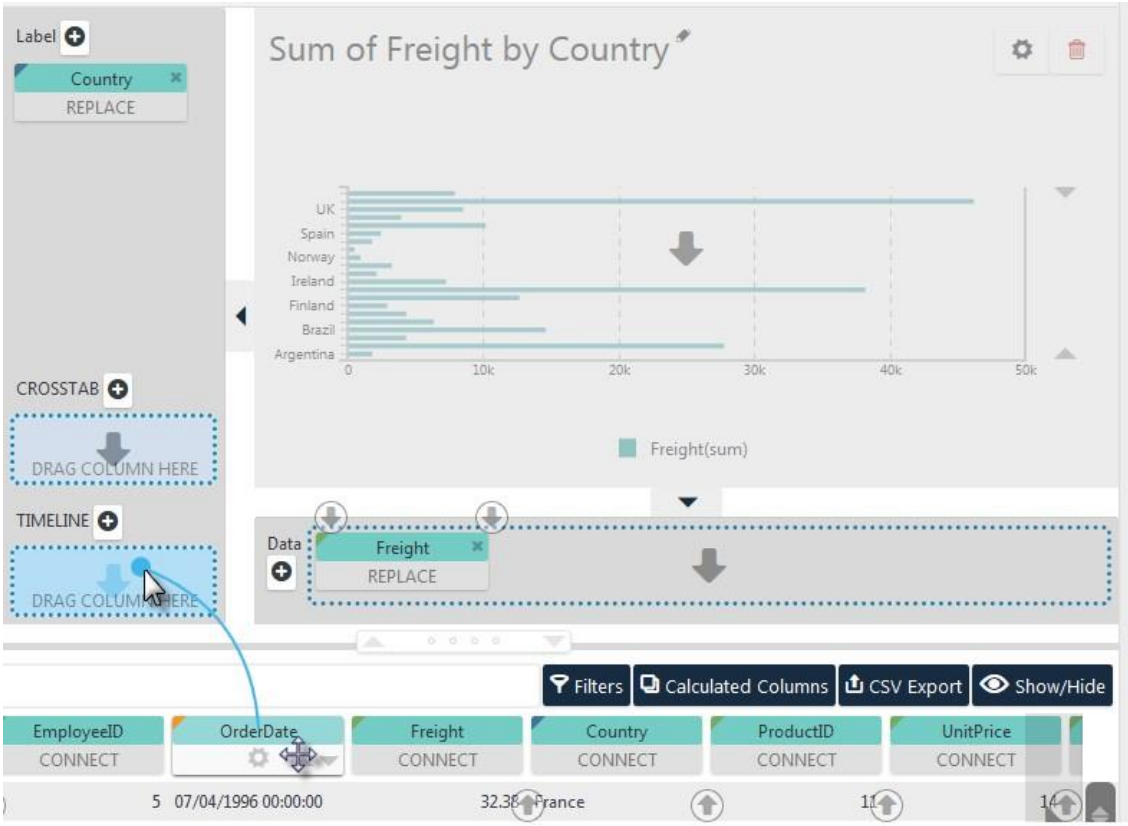
And the resulting chart is shown above.



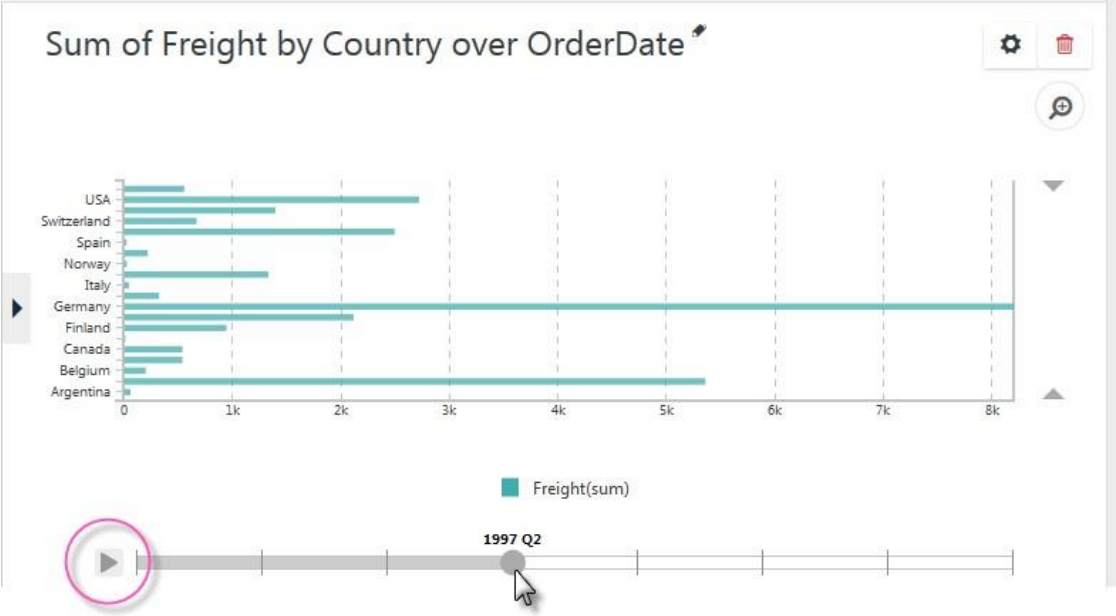
You can add more series by dropping more pills in the Secondary drop zone and the chart will add them, as shown above. Their chart types will default to that of the last pill added.

Creating a Timeline Chart

A Timeline chart shows you how data has changed over time. In order to create a Timeline chart in the Thinkspace, first create a chart as usual:



Then drag-and-drop the pill for a temporal (DateTime) column into the TIMELINE drop zone, as shown above. You can use the "+" icon to a select column from a list instead of dragging if you prefer.



The animation controls will appear below the chart; these control the presentation of the chart data over time. Click the "Play" icon, circled above, to start/stop sequencing the data. You can also drag the playback point forwards and backwards with your mouse cursor.

Using the Chart Explorer Menu

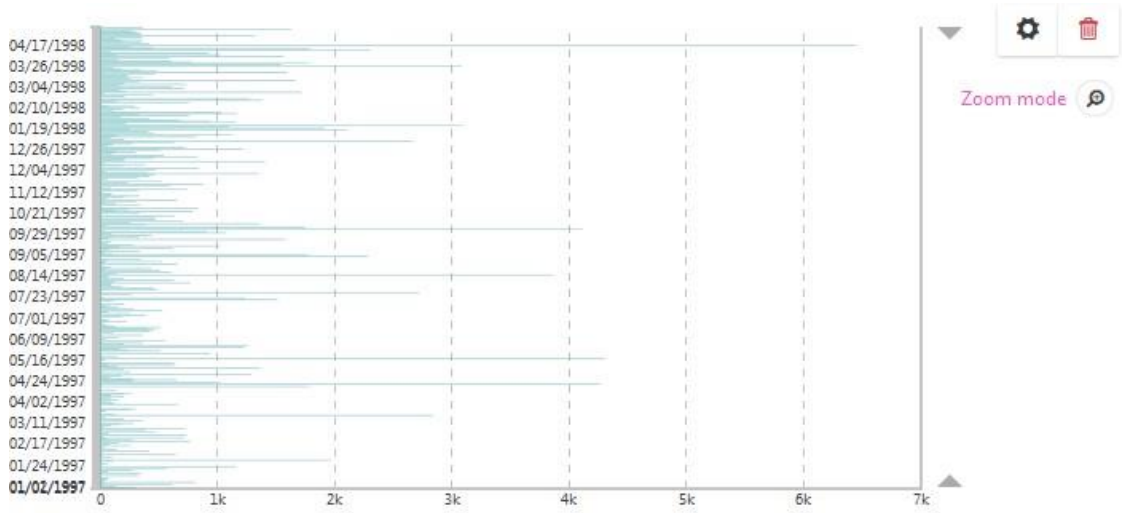
A number of features are controlled by the **Chart Explorer** menu, which appears in the upper right-hand corner of the visualization area:

Click the "magnifying glass" icon to open the menu (it's only visible when your mouse cursor is over a chart). When opened, four "satellite" options appear around it. Each mode is discussed in a following section. Click an option to select it, or click the central EXPLORER icon to close the menu.

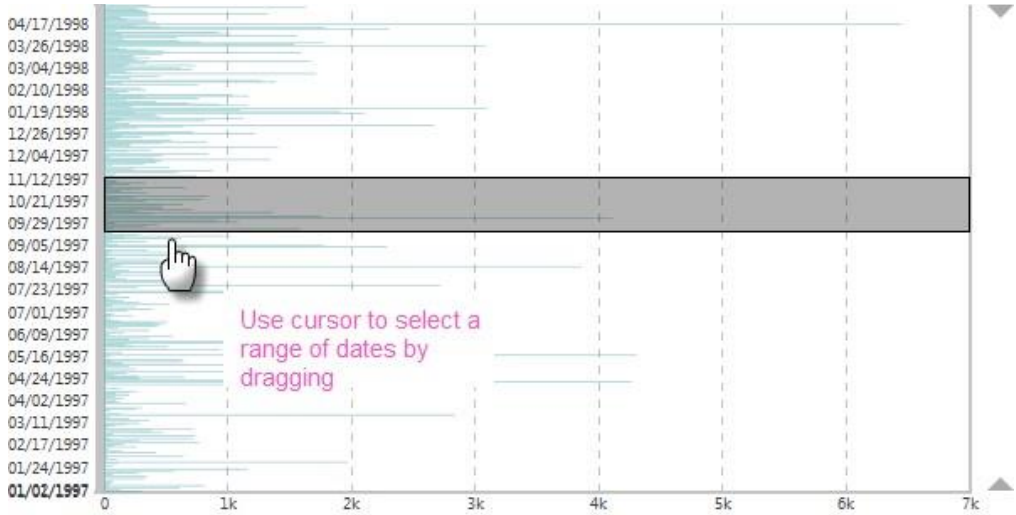
Chart Explorer modes can work together. For example, you can Zoom into a chart, then switch to Drill mode to select a data point and generate a temporary view of the data.

Zoom Mode: Zooming and Panning Data

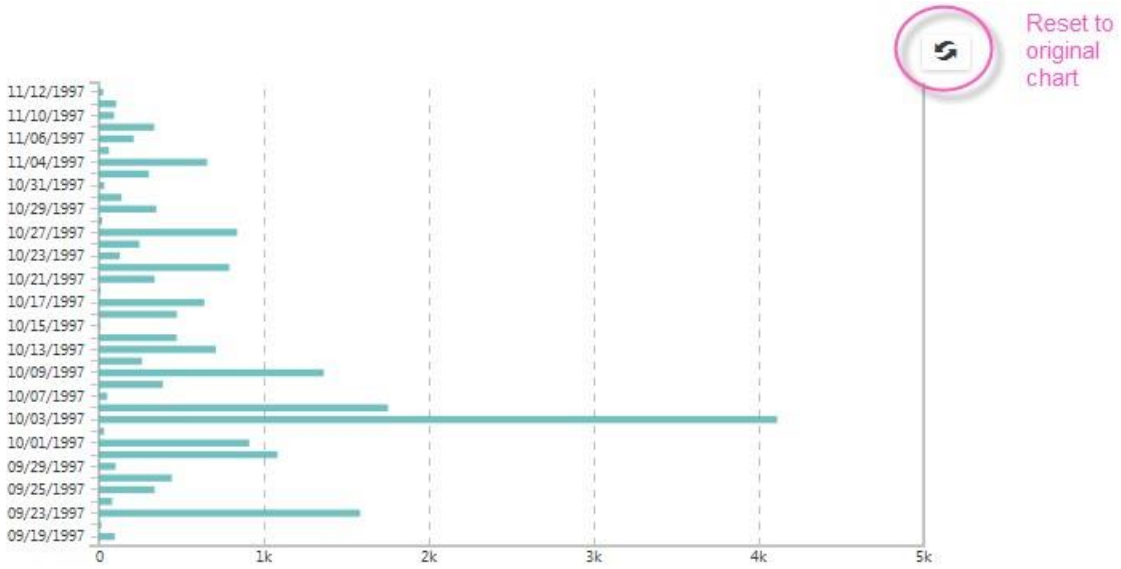
Charts may include so much data that it's useful to be able to "zoom" into them. The Thinkspace includes a zooming and panning feature that lets you do just that. Consider this bar chart:



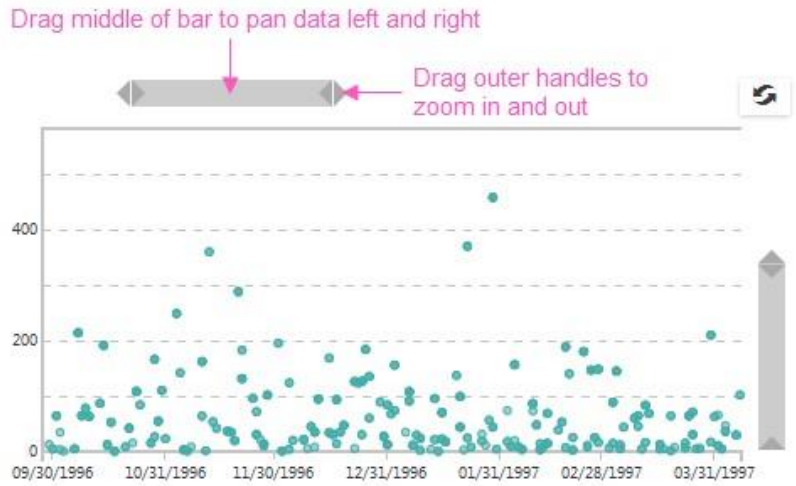
Interesting, but suppose you want to look more closely at a specific range of dates?



You can zoom "into" the chart by dragging a selection area around certain dates, as shown above. Depending on the chart type and data, you may be dragging the selection area vertically, as above, or horizontally, or both. When you release your mouse button, the chart will be re-drawn to include just the selected data.



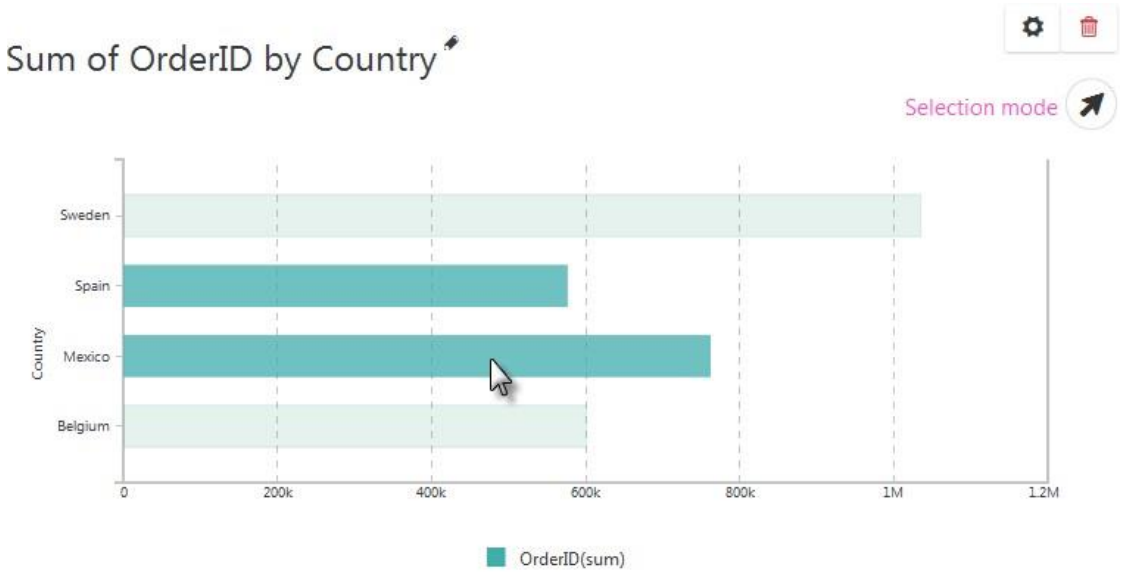
After the chart zooms in on your selected data area, a **Reset** icon will appear, as shown above. Click it to reset the chart to its original state.



Depending on the chart type and data, you'll also see a vertical and/or horizontal "pan-zoom" bar outside the chart, adjacent to where your selection area was. The example Scatter chart above has both. Drag the bar's outer handles to zoom in and out, and drag in the middle of the bar to pan the chart canvas through the data.

Selection Mode: Selecting Data Points

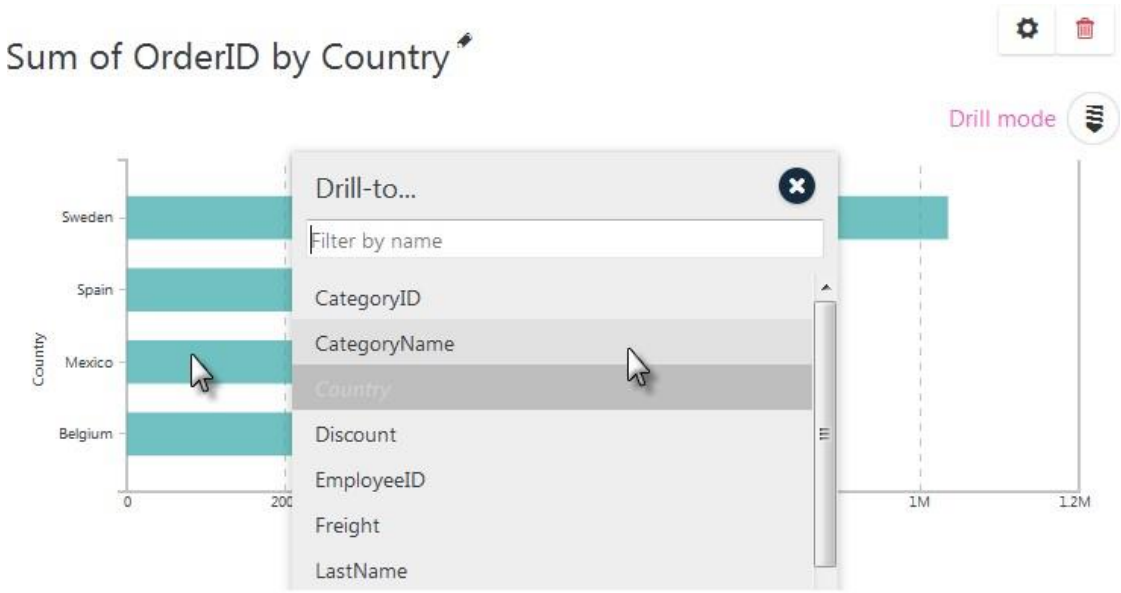
You can use *Selection* mode to enable a kind of "data point filtering":



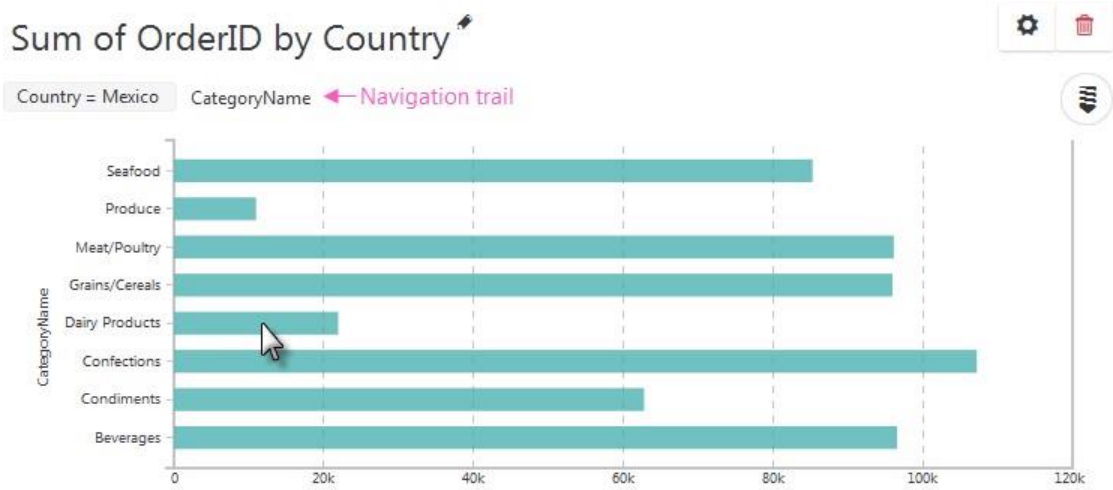
As shown in the example above, two bars in the chart have been selected by clicking them; click them again to toggle their selection. When one or more bars (or data points in any chart) are selected, all other bars are dimmed. When you click a bar, the data in the table below is immediately filtered to include only the selected bar values.

Drill Mode: Drilling into Data

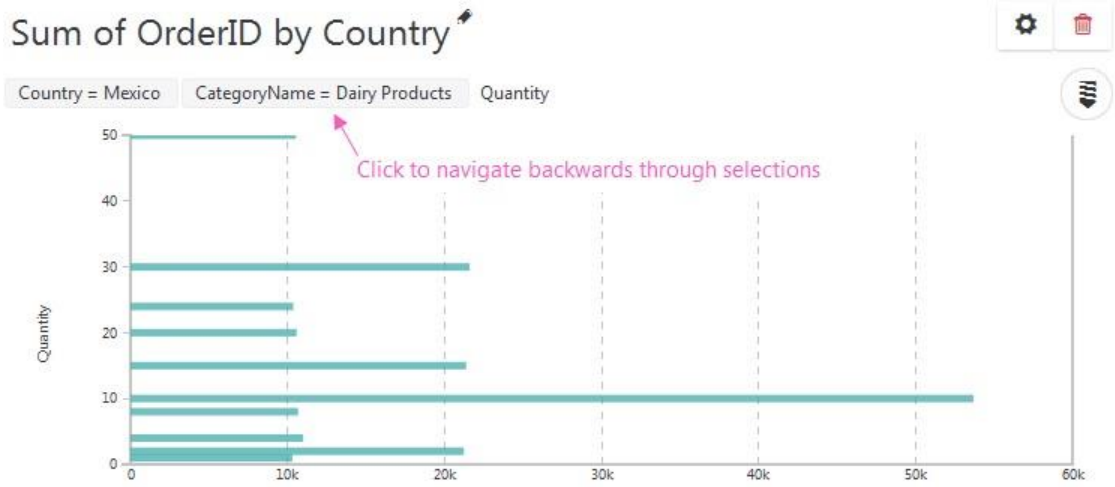
You can use *Drill* mode to generate temporary views of supporting data:



When *Drill* mode is selected and a bar is clicked, the Drill-to menu appears, as shown above. Select a column (in the example "CategoryName") to drill down into and the chart will be re-drawn:



You can continue to drill down by clicking another bar ("Dairy Products"), as shown above. A "navigation trail" appears just below the chart title showing the drilling actions taken.

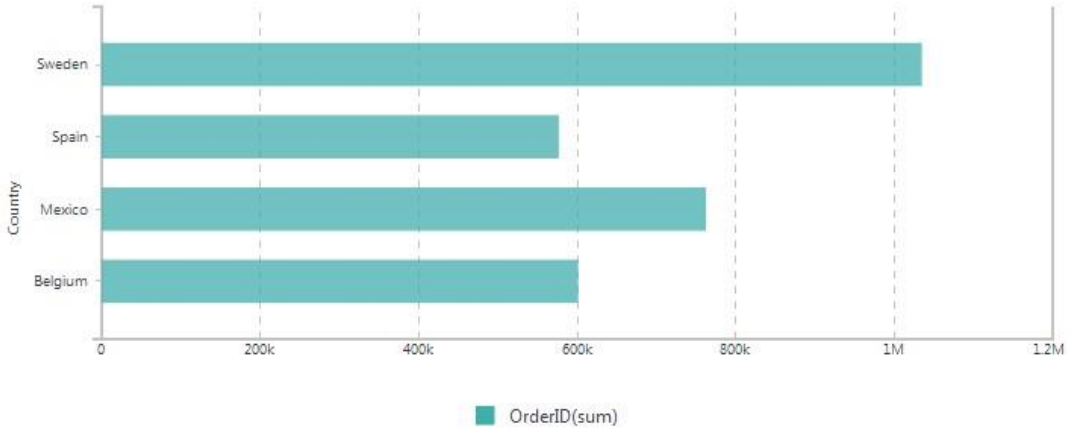


The navigation trail's links allow you to navigate backwards through the drill selections you've made, regressing the chart with each step.

Exporting to a .PNG Image

You can export your chart to a file, using the **Export to Image** option:

When you select the option, your chart is saved as a .PNG image file and your browser is sent a link to it. The browser usually reacts to this as an open/download file request and, depending its configuration, will either save the file to the browser's Download folder or display a dialog box similar to the one shown above.



An example of an exported chart image is shown above. Note that it *does not* include the title that you see for it in the Thinkspace.

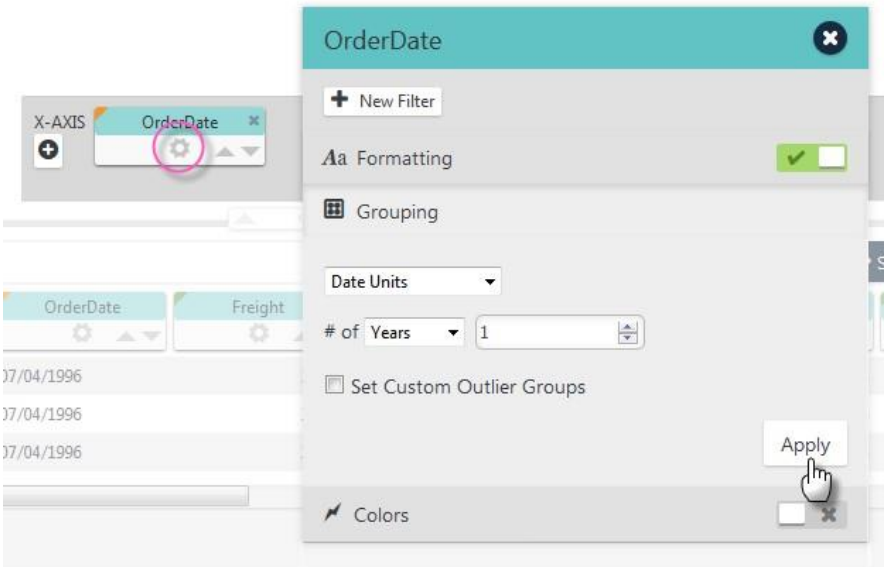
Working with Crosstabs

A **Cross Tabulation** (often abbreviated as "crosstab") is a data visualization that displays the *joint distribution* of two or more variables simultaneously. Crosstabs can be charts or they can be tables, the latter sometimes called "pivot tables". Both make it easy to sort, count, and total the data. Let's start by visualize "cross-tabbed" data in a chart.

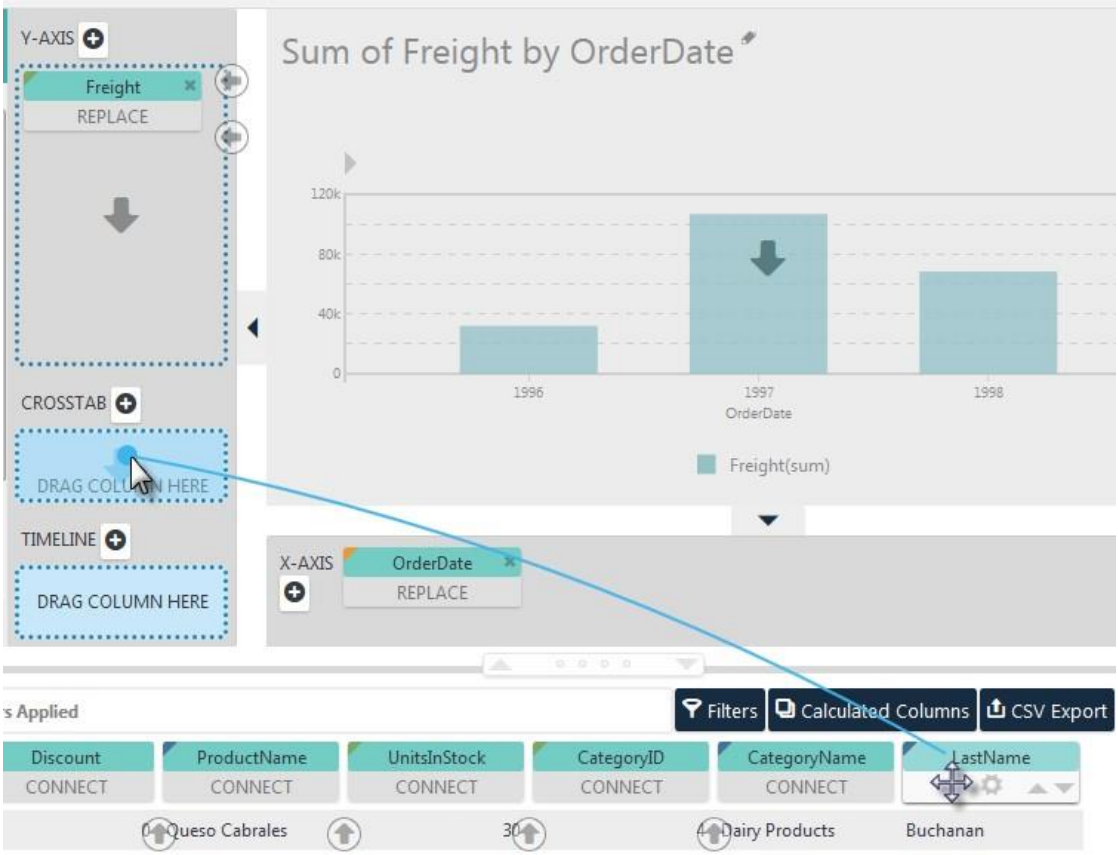
Working with Crosstab Charts

Let's start with data that has been "cross-tabbed" and visualize it in a chart:

Our starting point will be a regular Column chart, showing *Freight* by *OrderDate*, as shown above.

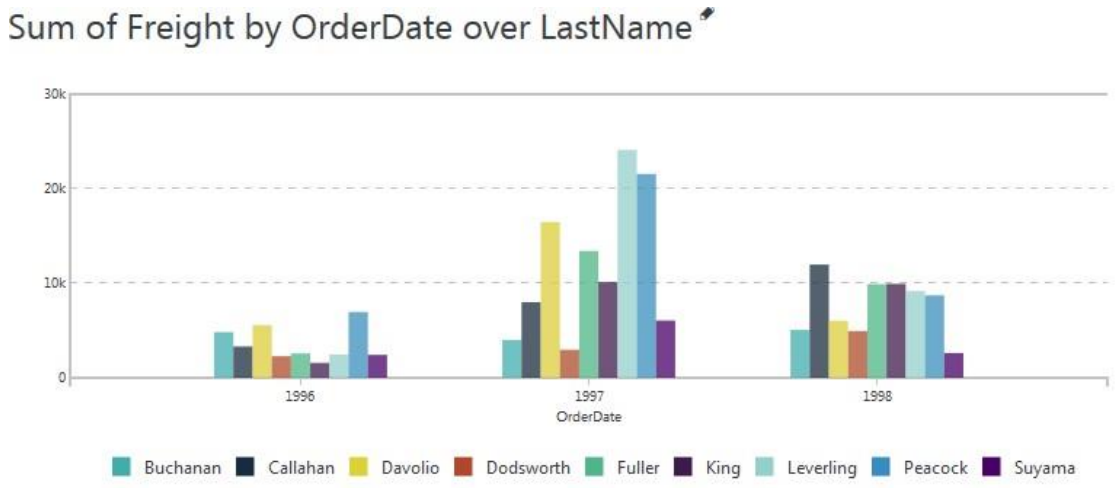


Open the *OrderDate* pill using its Gear icon, and change its Grouping to use Date Units, with # of Years = 1, as shown above. The chart will be re-drawn accordingly.

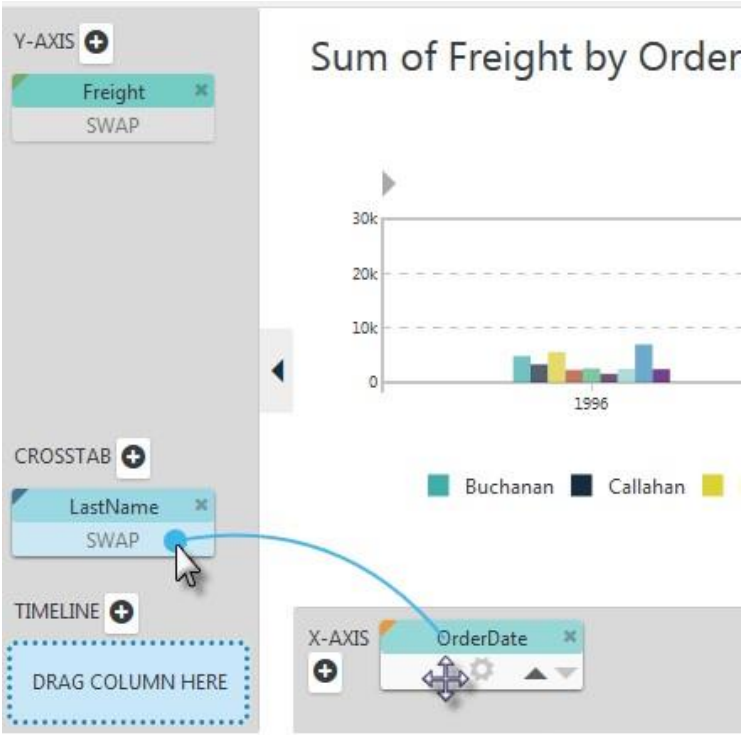


Drag and drop the *LastName* pill from the data table into the CROSSTAB drop zone, using the Blue Dot Connector, as shown above. The chart will be re-drawn accordingly.

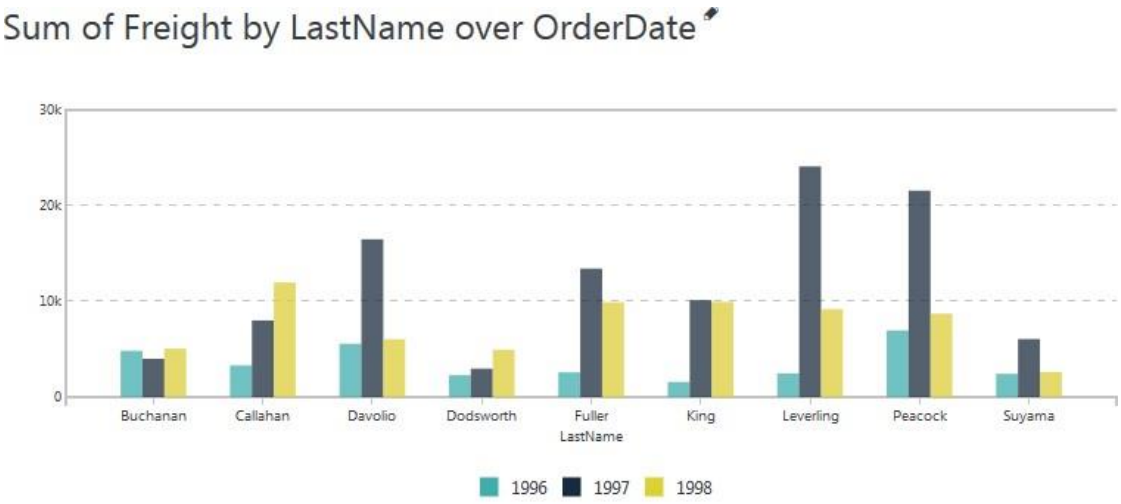
The cross-tabbed data can be shown as stacked (values), stacked (percentages), or grouped side-by-side. When the *LastName* pill was dropped, the option for the selected chart type in the Visualization menu acquired a "More Options" arrow icon, circled above. Click it to see the crosstab charting options and select the **Grouped Crosstab Column** option.



The resulting chart will look like the example above.



If you'd like to view the data a little differently, for example, grouped by *LastName* instead of *OrderDate*, it's easy to do - just drag and SWAP the two column pills, as shown above.

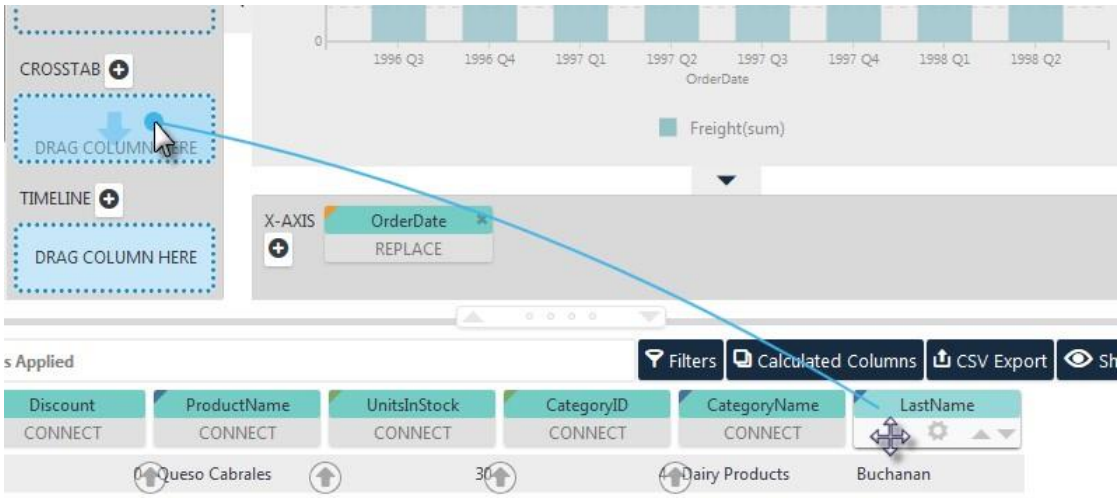


And the resulting chart is shown above.

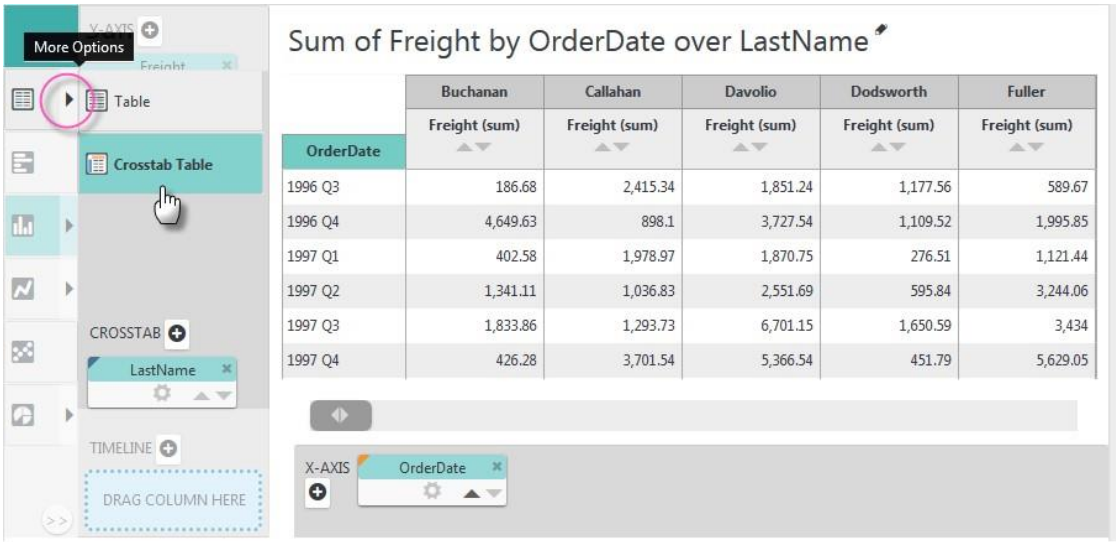
Working with Crosstab Tables

If you'd like to see the data in a crosstab table, that's easy to do.

Our starting point once again will be a regular Column chart, showing *Freight* by *OrderDate*, as shown above. This time the OrderDate column's **Grouping** will be set to # of Quarters = 1.



Drag and drop the *LastName* pill from the data table into the CROSSTAB drop zone, using the Blue Dot Connector, as shown above. The chart will be re-drawn accordingly.

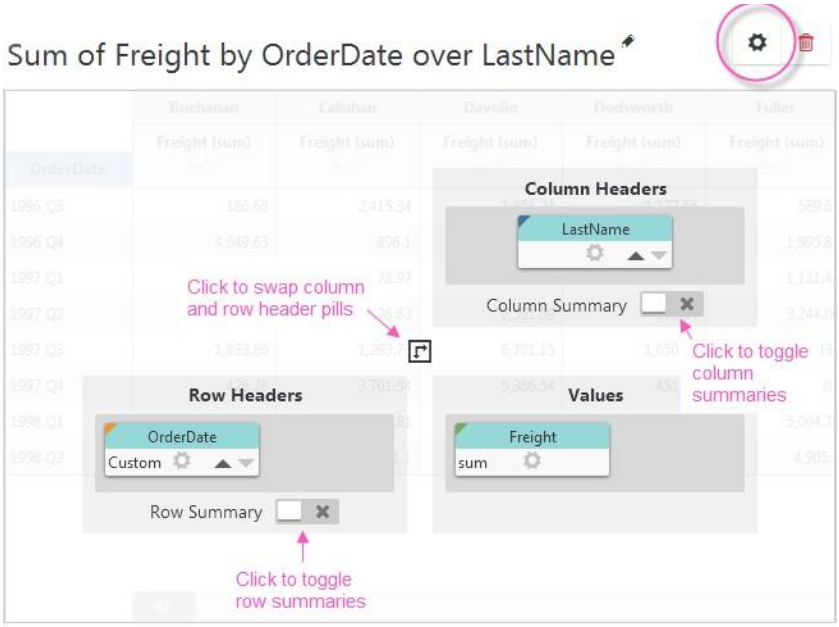


When the *LastName* pill was dropped, the option for the Table type in the Visualization menu acquired a "More Options" arrow icon, circled above. Click it to see the Table options and select the **Crosstab Table** option. The Column chart will be replaced with a Crosstab Table.

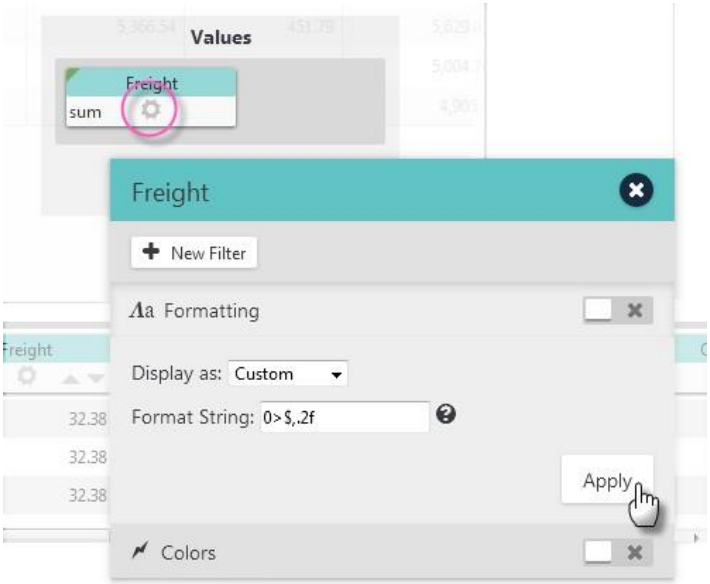
Depending on the width of your browser window, a horizontal scroll bar may appear so that you can scroll the table to additional columns to the right.

Editing the Crosstab Table

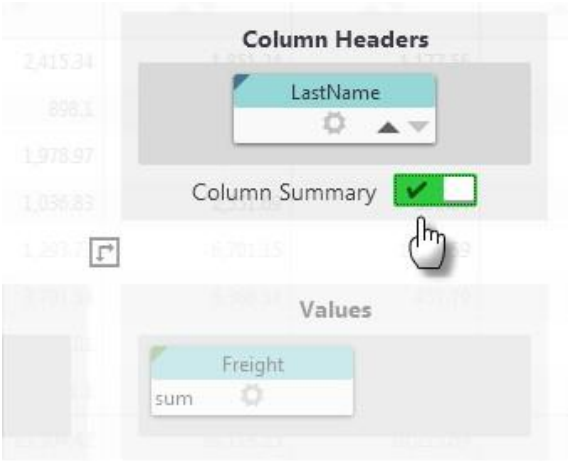
You'll notice that the drop zones were hidden when the crosstab table was rendered. How can we edit the table?



Click the **Settings** icon in the upper right-hand corner, circled above. A panel with column pills and controls, like those above, will slide open. The pills' Sorting and Gear menu icons can be clicked to sort, format, and filter the data, as usual. Let's format the *Freight* column values.



Click the *Freight* pill's Gear icon and select the Formatting option. Select the Custom format display and set the format string to *0>$,.2f* as shown above. This will format the values as currency and right-justify them.



Let's also add a **Column Summary**, by clicking the button shown above, that will give us the totals in a row across the bottom of the table. Click **Apply** to save the changes and hide the panel

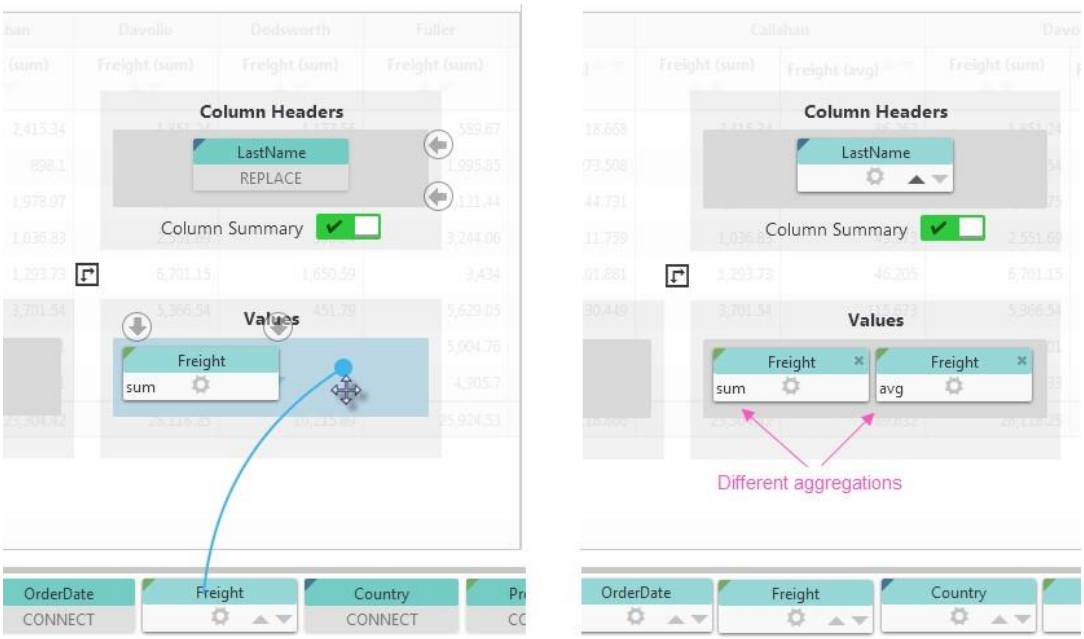
Sum of Freight by OrderDate over LastName

OrderDate	Buchanan Freight (sum)	Callahan Freight (sum)	Davolio Freight (sum)	Dodsworth Freight (sum)	Fuller Freight (sum)
1996 Q3	$186.68	$2,415.34	$1,851.24	$1,177.56	$589.67
1996 Q4	$4,649.63	$898.10	$3,727.54	$1,109.52	$1,995.85
1997 Q1	$402.58	$1,978.97	$1,870.75	$276.51	$1,121.44
1997 Q2	$1,341.11	$1,036.83	$2,551.69	$595.84	$3,244.06
1997 Q3	$1,833.86	$1,293.73	$6,701.15	$1,650.59	$3,434.00
1997 Q4	$426.28	$3,701.54	$5,366.54	$451.79	$5,629.05
1998 Q1	$5,058.34	$9,248.81	$4,018.01	$2,517.54	$5,004.76
1998 Q2	$8.80	$2,731.10	$2,031.33	$2,436.34	$4,905.70
SUMMARY	$13,907.28	$23,304.42	$28,118.25	$10,215.69	$25,924.53

The resulting crosstab table looks like the example shown above.

Adding Multiple Column Headers

It's easy to produce a multi-level crosstab table, by adding more column header values:

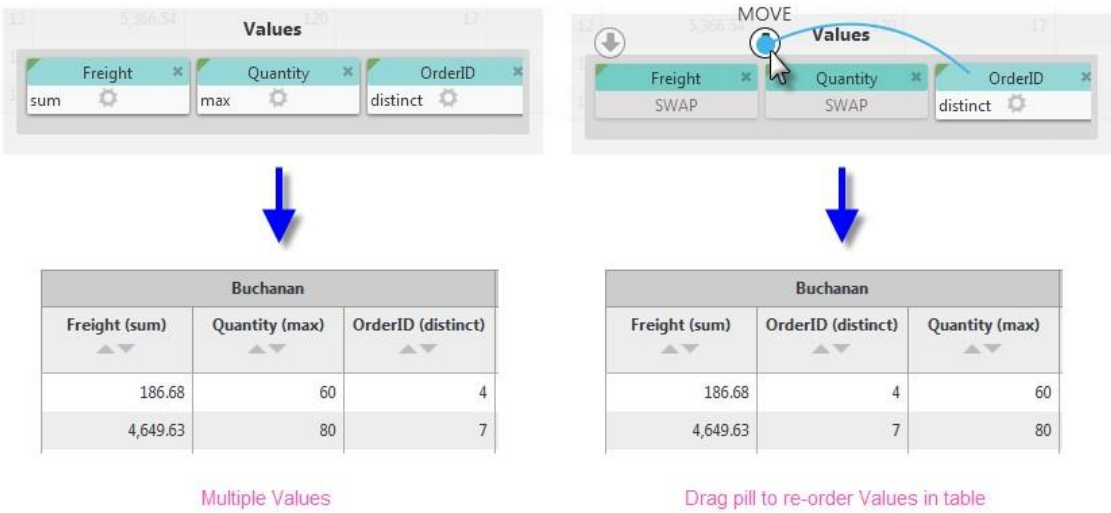


Open the crosstab editing panel again and drag-and-drop the *Freight* column pill *from the data table* into the Values drop zone, as shown above, left. Once in the drop zone, this second pill has automatically been given a *different aggregating function* than the first pill. You can, of course, select the aggregating function of your choice by clicking the function name. Click **Apply** to save the changes and hide the panel

Avg of Freight and Sum of Freight by OrderDate over LastName

	Buchanan		Callahan		Davolio	
OrderDate	Freight (avg)	Freight (sum)	Freight (avg)	Freight (sum)	Freight (avg)	Freight (sum)
1996 Q3	$18.67	$186.68	$86.26	$2,415.34	$66.12	$1,851.24
1996 Q4	$273.51	$4,649.63	$42.77	$898.10	$88.75	$3,727.54
1997 Q1	$44.73	$402.58	$46.02	$1,978.97	$69.29	$1,870.75
1997 Q2	$111.76	$1,341.11	$49.37	$1,036.83	$85.06	$2,551.69
1997 Q3	$101.88	$1,833.86	$46.20	$1,293.73	$131.40	$6,701.15
1997 Q4	$30.45	$426.28	$115.67	$3,701.54	$111.80	$5,366.54
1998 Q1	$140.51	$5,058.34	$168.16	$9,248.81	$61.82	$4,018.01
1998 Q2	$8.80	$8.80	$85.35	$2,731.10	$37.62	$2,031.33
SUMMARY	$118.87	$13,907.28	$89.63	$23,304.42	$81.50	$28,118.25

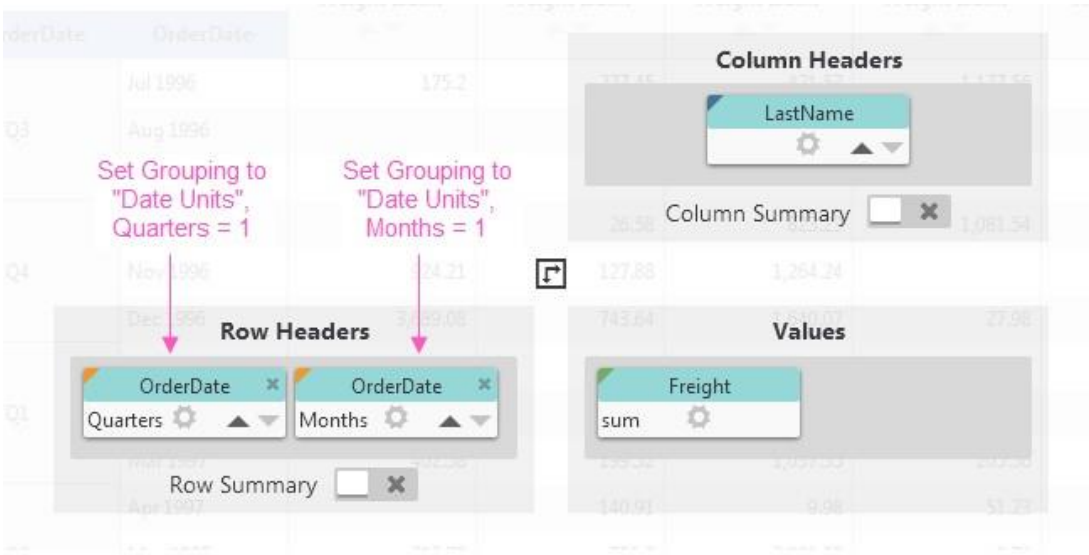
The resulting crosstab table now includes separate columns for the two different aggregations of *Freight* values, as shown above.



Of course, you can also drop *different* column pills into the Values drop zone, as shown above, and re-order them by using the Blue Dot Connector.

Adding Multiple Row Headers

We can also produce a multi-level crosstab table by adding more row header values with different groupings:



For example, open the editing panel again and drag-and-drop an *OrderDate* column pill from the data table into the Row Headers drop zone, as shown above. You may need to set the Grouping of the existing OrderDate pill to Date Units, # of Quarters = 1 before you can drop the second pill there.

When you drop the second pill there, it will be automatically grouped differently from the first one. Click its Gear icon to check its Grouping configuration and, if it's not already so, set it to Date Units, # of Months = 1. Click **Apply** to save the changes and hide the panel.

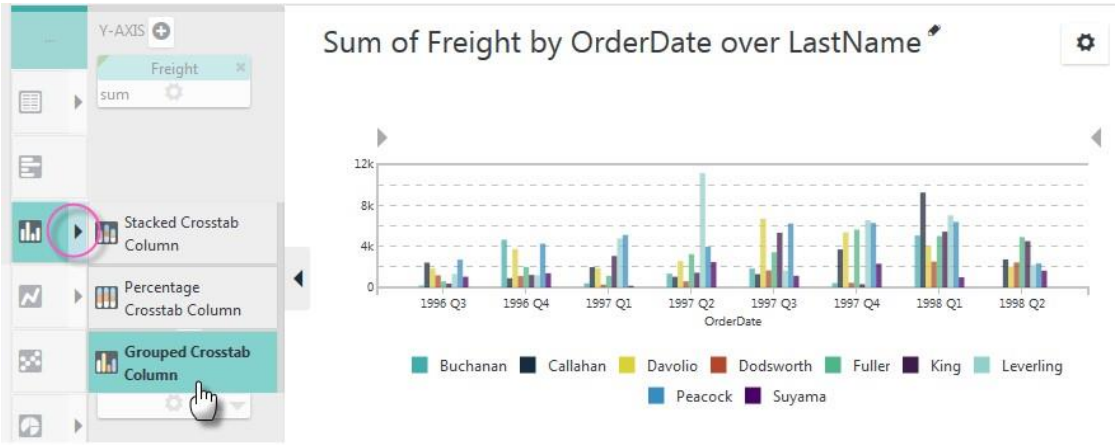
Sum of Freight by OrderDate and OrderDate over La...

		Buchanan	Callahan	Davolio	Dodsworth
		Freight (sum)	Freight (sum)	Freight (sum)	Freight (sum)
OrderDate	OrderDate				
1996 Q3	Jul 1996	175.2	277.45	421.53	1,177.56
	Aug 1996		1,239.83	643.5	
	Sep 1996	11.48	898.06	786.21	
1996 Q4	Oct 1996	36.34	26.58	823.23	1,081.54
	Nov 1996	924.21	127.88	1,264.24	
	Dec 1996	3,689.08	743.64	1,640.07	27.98
1997 Q1	Jan 1997		638.39	336.65	70.95
	Feb 1997		1,141.06	496.55	
	Mar 1997	402.58	199.52	1,037.55	205.56
1997 Q2	Apr 1997		140.91	9.98	51.23
	May 1997	713.79	756.2	2,001.59	9.74

The resulting crosstab table now includes separate rows for each month, within each quarter, as shown above.

Switch to Crosstab Chart

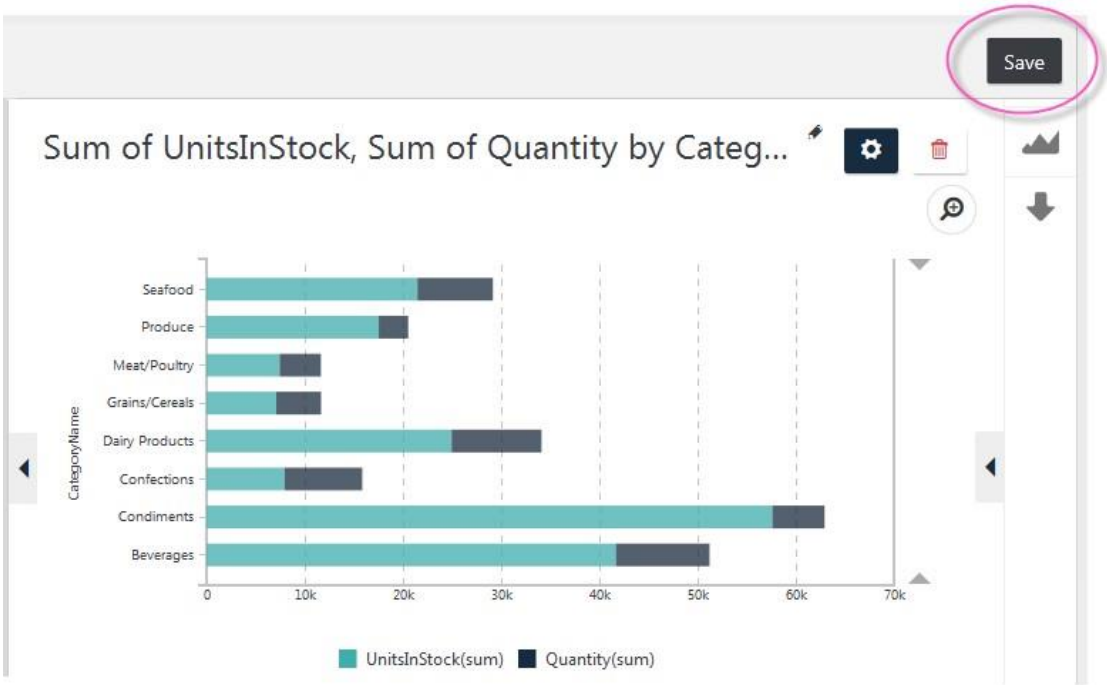
You can also switch between a crosstab table and a crosstab chart pretty easily:



Just open the Visualizations menu and select the crosstab chart of your choice. In the example above, a **Grouped Crosstab Column** chart was selected.

Saving Your Visualizations

The Thinkspace includes an optional feature that lets you save the settings and visualizations you've created and re-use them in a later session.



If your application has been configured for this feature, the Thinkspace will display a **Save** button, as shown above. Click it to save your settings and the chart.

Your application will include other buttons or links, outside of the Thinkspace, to retrieve and apply the saved settings.

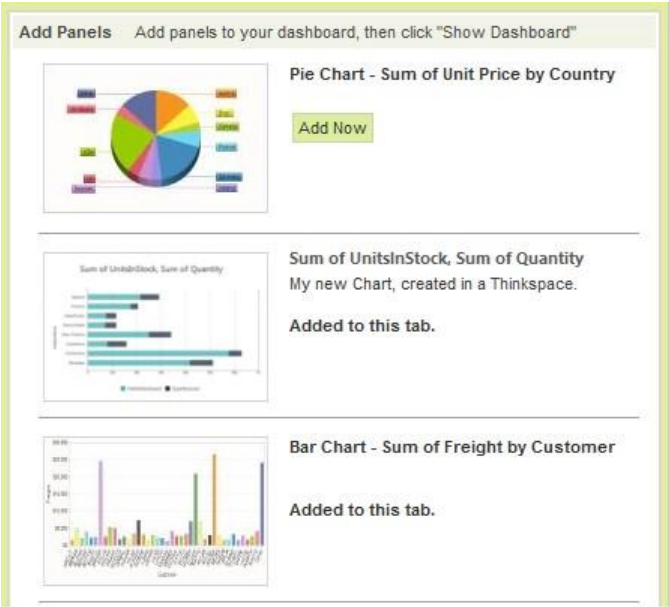
Adding Your Visualizations to Dashboards and Galleries

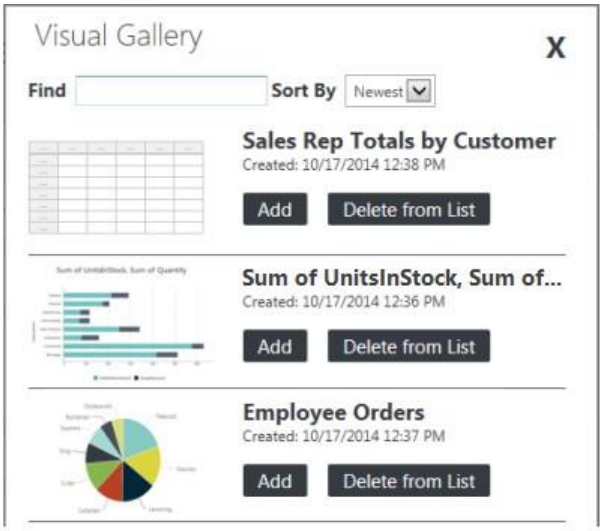
The Thinkspace includes an optional feature that lets you create a visualization in the Thinkspace and then add it as a new panel in an existing Logi Dashboard in another report, or add it to a Visual Gallery.

If your application has been configured for this feature, the Thinkspace will display a button like the one shown above. It may say "Add to Gallery" or "Add to Dashboard" or something similar, depending on how the application was configured.

When configured for use with a Dashboard and the button is clicked, the visualization is added immediately as a *new panel* in the Dashboard, as shown above. Or, if it's configured for use with a Visual Gallery, the visualization is added to the gallery but no immediate insertion occurs.

Just before the visualization is saved, you'll be prompted for the **Panel Title** (with the chart title from the Analysis Grid provided as a suggestion) and an optional description for display.





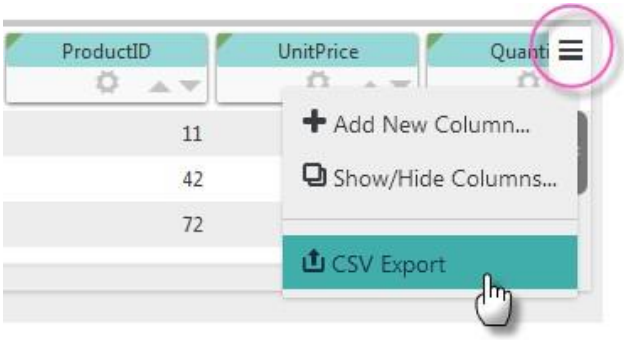
The new visualization thereafter appears in the Dashboard Configuration Page or Visual Gallery, as shown above, just like any other resource, complete with a thumbnail image. The visualization can be removed from the visible dashboard panels and from the configuration page or gallery entirely, using the usual controls.

You can insert multiple charts into a Dashboard using this technique.

For more information about Dashboards, see our online document *Introducing the Dashboard*.

Exporting Data to CSV File

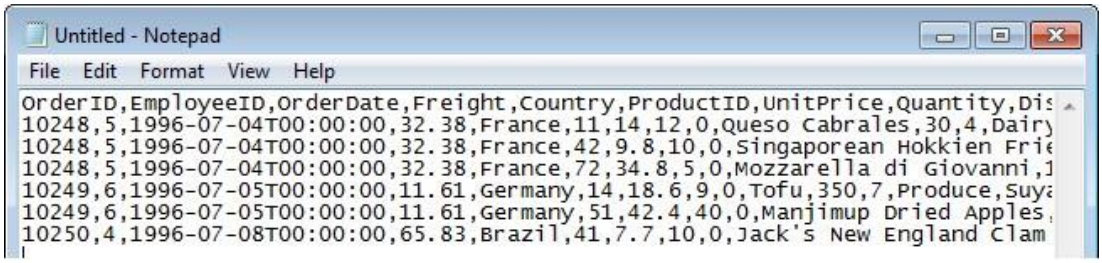
The Thinkspace includes a feature that allows you to export the data in your table to a file in standard CommaSeparated Values (CSV) format.



Click the Table Menu icon circled in the image above and select the CSV Export option to initiate an export. All columns and all rows in the table will be exported.

Attempting to export a very large number of rows might take a long time.

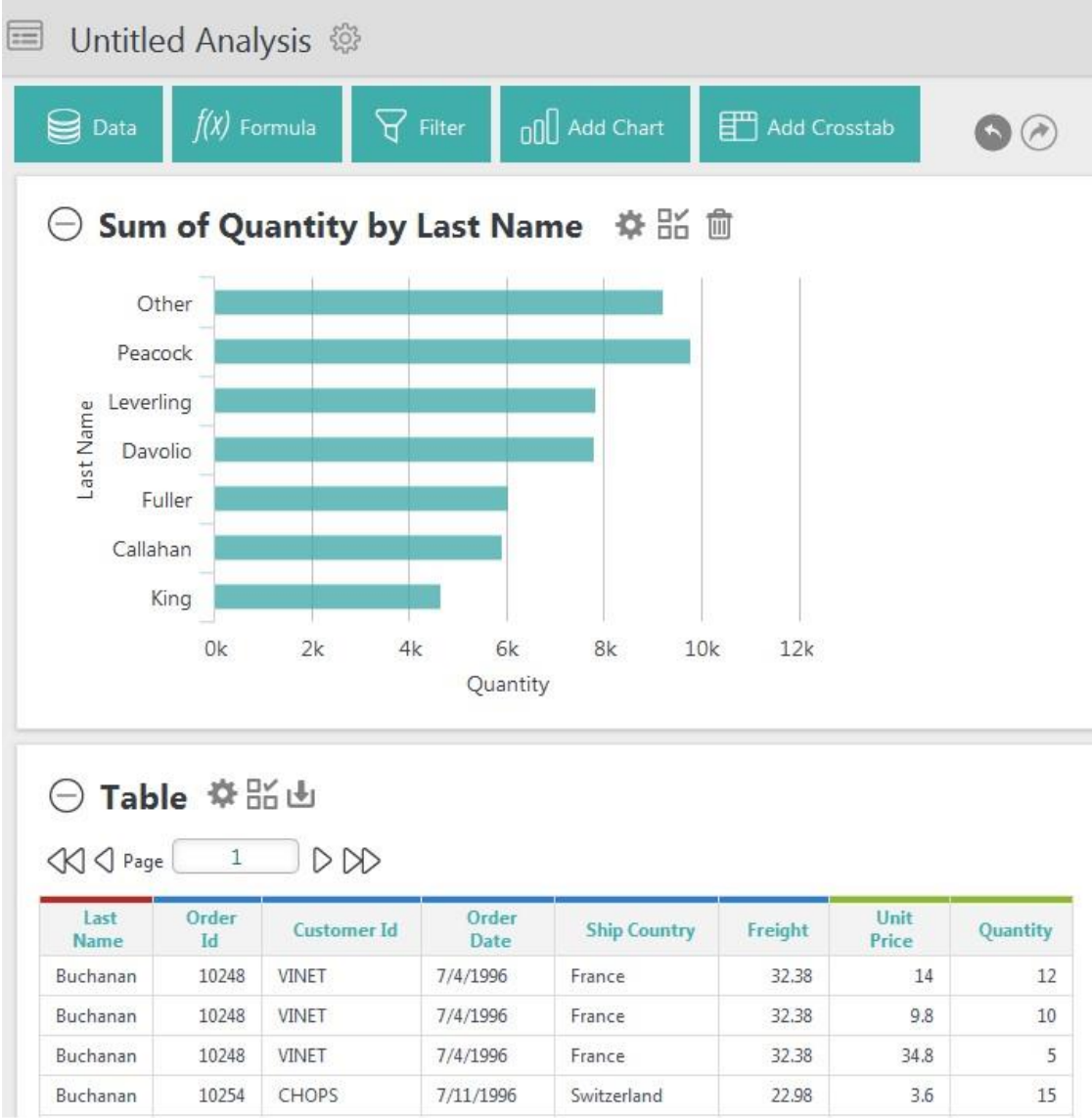
If you have an application, such as Excel, configured for CSV files, you'll prompted to open or save the file.



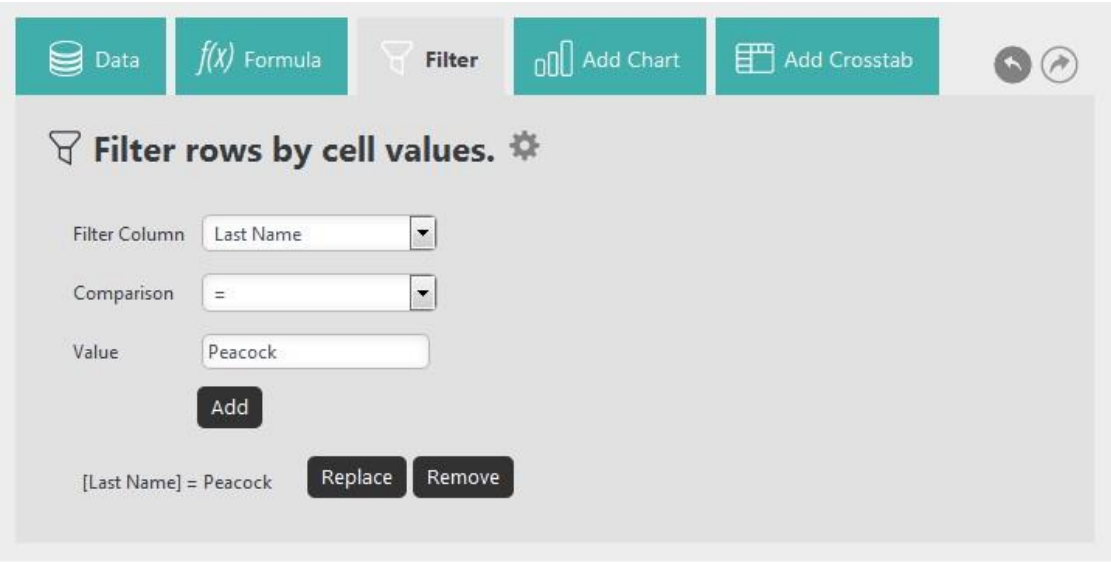
Your table data will be exported, as shown above, with column names in the first row.

Analysis

Analysis is using the Analysis Grid to develop different analysis objects.

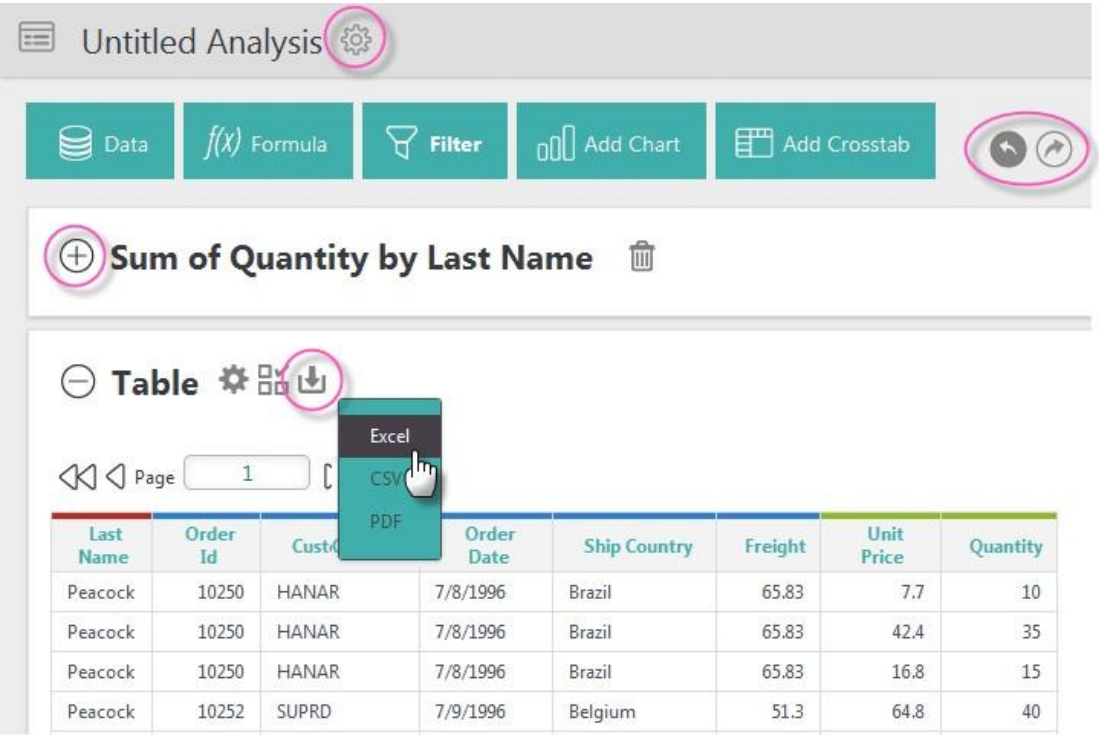


In the example analysis shown above, both a table and a chart are displayed in an Analysis Grid.



The Analysis Grid displays a set of tabs, or buttons, at the top that allow you to manipulate its data and visualizations.

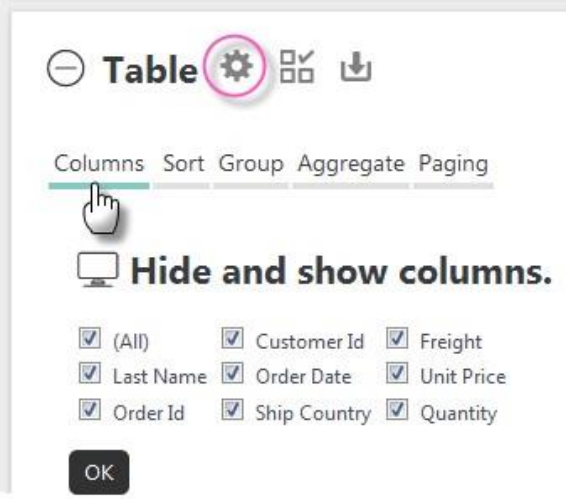
When a tab is clicked, a configuration panel for that feature appears, as shown above. Clicking it again hides the panel.



The **Gear** icon, circled at the top of the image above, is used to access configuration details throughout the Analysis Grid. It can be used in the example above to *rename* of the analysis, or *duplicate* it.

Undo/Redo icons at the top near the tabs allow you to easily revert or reapply changes made
Visualization Panels, shown above, contain either a table, a crosstab table, or a chart. Panels can be collapsed or expanded using the "+" and "-" icons. You can also rearrange their order by clicking your mouse near the top of a panel, and dragging it up or down.

Panels containing tables can display an **Export** icon for exporting the table data to Excel, CSV, or PDF.



Clicking a panel's Gear icon, highlighted above, will display or hide a configuration area for the specific visualization. The Table configuration area, for example, let's you control a variety of table features, which can be selected using the horizontal menu.

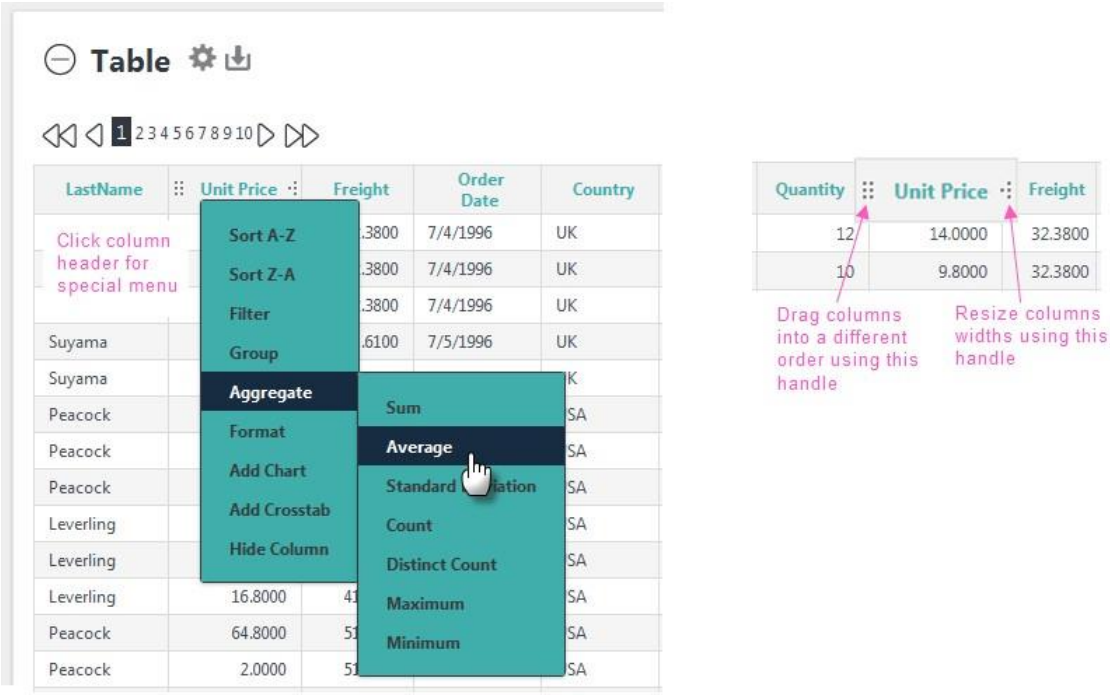


Table column headers contain a variety of features. When column header text is clicked, drop-down menus provide sorting, filter, formatting, grouping, and other features, as shown above.

Table columns can also be *dragged* to rearrange the column order or to adjust column widths.

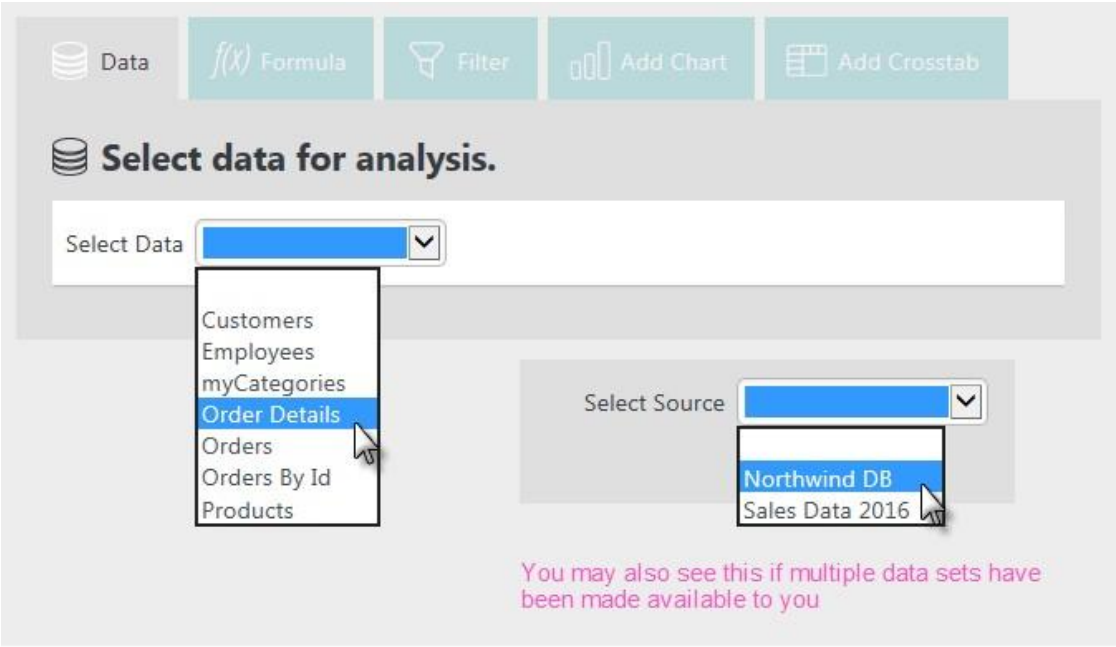
The analyses and visualizations you create can be saved, viewed, combined, and even exported. They can be scheduled for regular production and shared with others. Medusa Analytic makes all of this easy to do, so let's get started.

From the Home page, click the **Analysis** menu option.

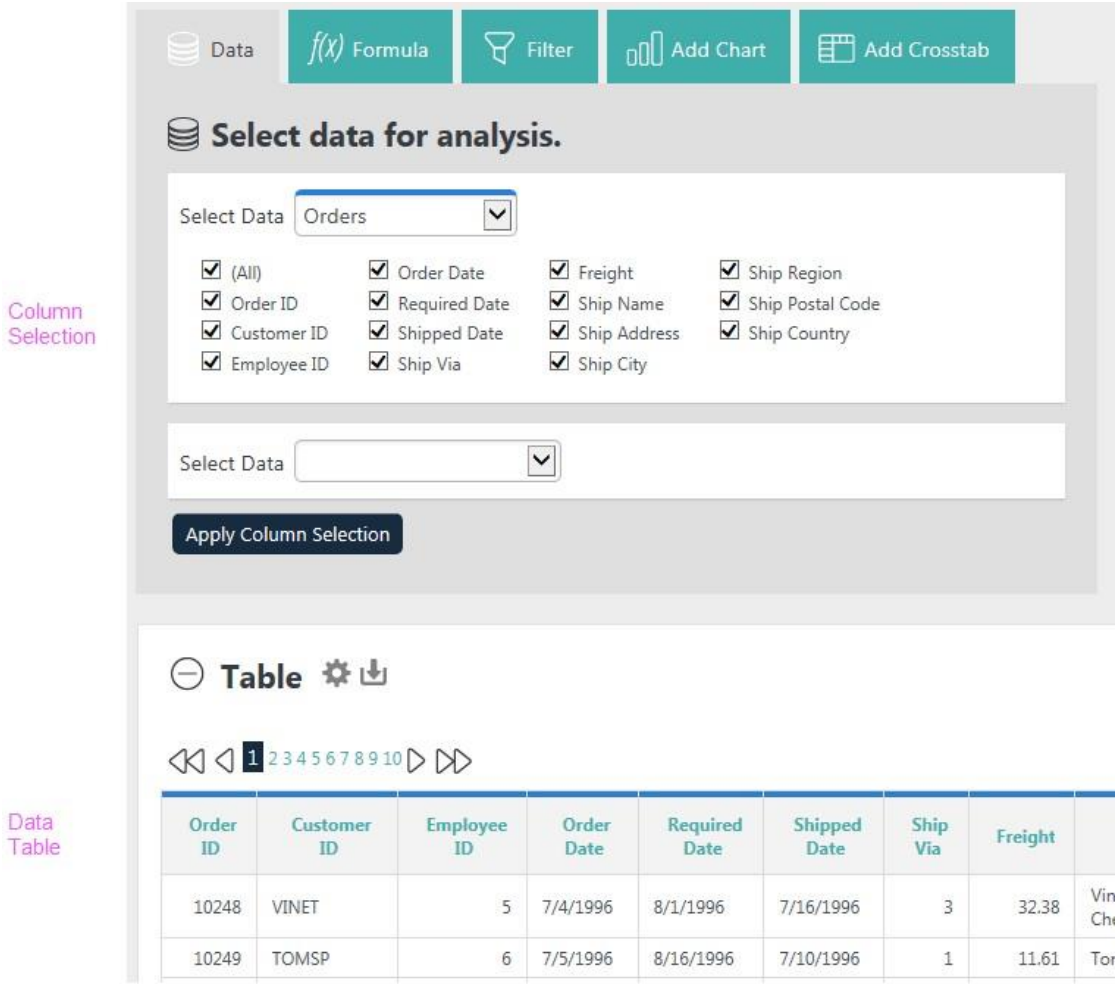
Selecting Data

Depending on how your application has been configured, you may or may not see this feature. Skip this section if you do not see a "Data" tab or button at the top of your Analysis Grid.

Click the "Data" tab or button to open its panel:

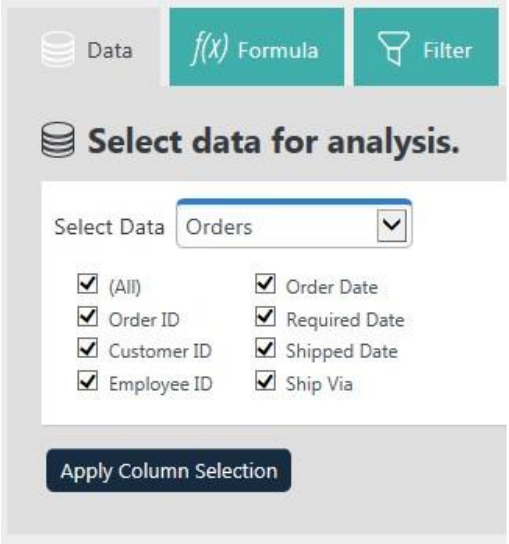


The first thing you'll need to do is select the data table or view you want to work with. The data source tables and views available to you have been determined by SoftPro Medical Solutions. The number of data sources be changing with the version of Medusa Analytic.

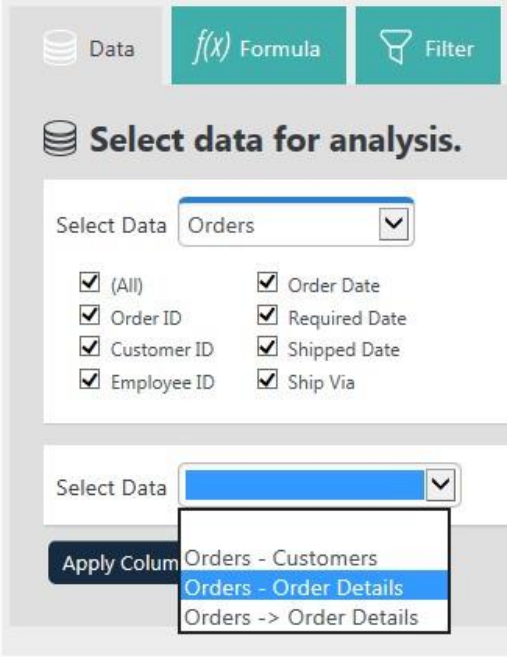


As soon as you select data, a data table will appear showing it. A set of column selection checkboxes will also appear, as shown above. You can un-check the boxes for columns you *don't* want to include in your analysis work.

If it's visible, click **Apply Column Selection** to update the table, otherwise the table may update automatically.



No Joins available



Multiple Joins available

Your application may be configured to allow you to "join" different data tables. If so, you'll see additional data selection lists, as shown above, right.

By default, items like Orders - Customers indicate an *Inner Join*, while items like Orders →Order Details indicate a *Left Outer Join*. However, these designations can be customized by your application's developer and other Join types may be available.

What's a "join"? A join combines two sets of data to produce a single dataset. Different types of joins produce different results. For example, an *Inner Join* selects all rows from both tables as long as there is a match between a column in both tables. A *Left Outer Join* selects all rows from the first table and adds rows from the second table that match a specified column value.

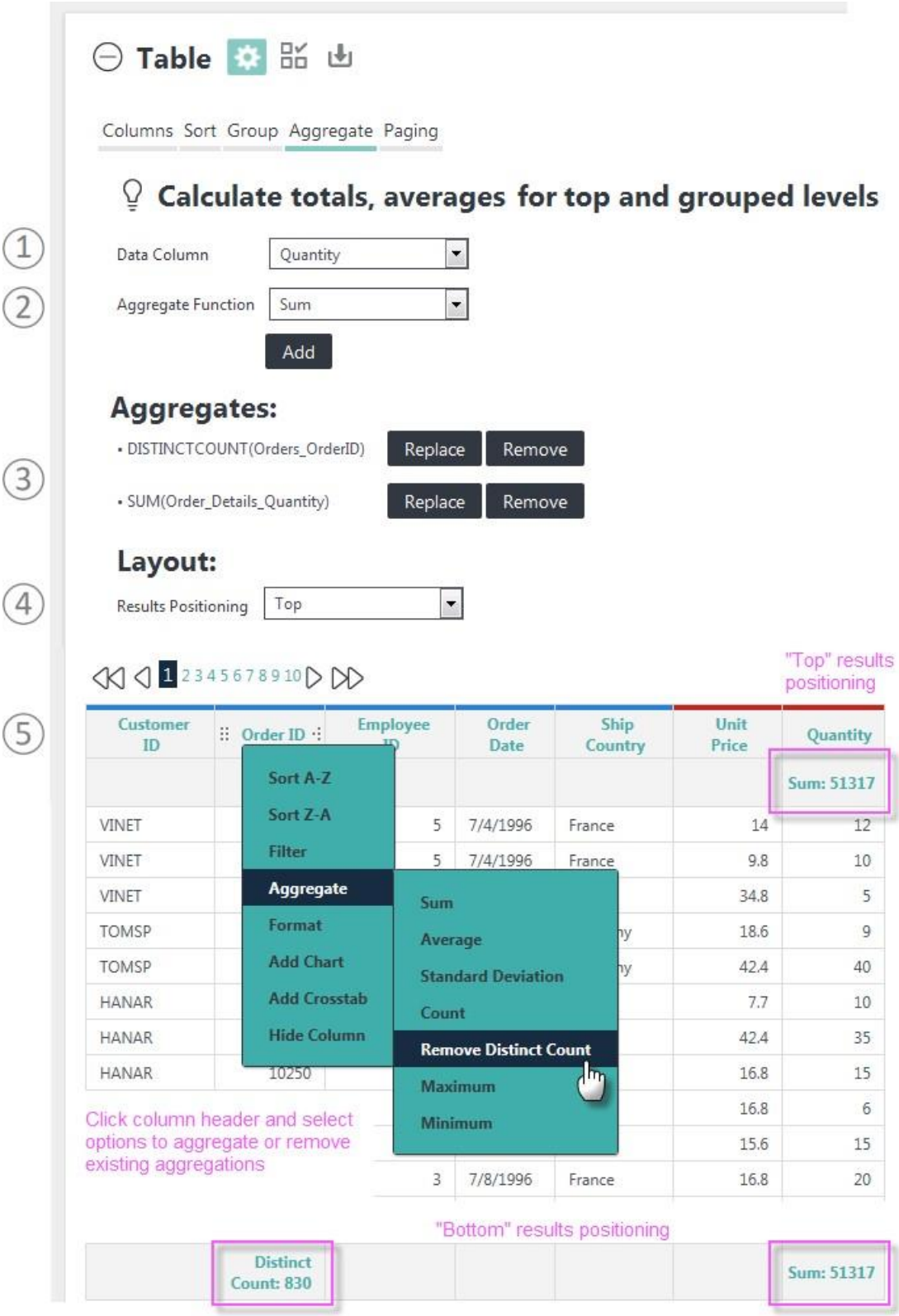
When you select data that joins tables, you'll see a color-coding scheme applied to the table that indicates where data came from. In the example shown above, table columns with a ***blue*** border came from the original table "Orders" while columns with a ***red*** border came from the selected join.

Once you've selected data, all of the other tabs or buttons at the top of the Analysis Grid become enabled.

Click the **Data** tab or button to hide the data selection controls.

Creating Formula Columns

Click the **Formula** tab to use the feature that allows you to add calculated columns to the data.



New columns are added at the right side of the table but can be relocated by dragging them. Here's how to use this feature:

1. Help constructing a formula is available via the **Formula Help** button.
2. Enter the **Name** for the column that will be added to the table.
3. Insert column names into the Formula box by selecting them here and clicking **Insert**.
4. Enter the *formula* by typing it in here. Column names should be enclosed within square brackets [ ] and typical math operator symbols, such as + - * / should be used. You can always edit or delete anything in this space.
5. Specify the **Data Type** for the new column.
6. Specify a **Display Format**. Formatting options include numeric and date formats. Click **Add** to create the new column and refresh the table.
7. As formula columns are created, they're added to the Formula Columns list. Use the adjacent **Replace** and **Remove** buttons to manage the list. Columns that have been added are now included in the list of available columns (3) for use in other formulas.

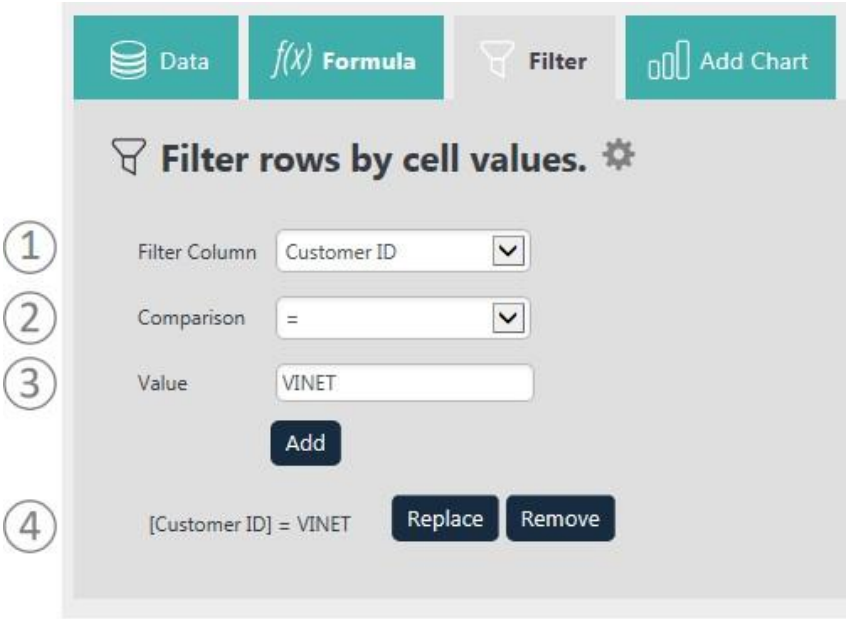
Your application developer will have to advise you concerning which function set is valid in the Formula box. These can vary depending on the way in which data is retrieved from the data source.

In one case, JavaScript-style functions can be used, but in another case only functions supported by the database server itself can be used. The help shown when you click the **Formula Help** button will provide useful information, based on the data source.

When done, click the **Formula** tab to hide the panel.

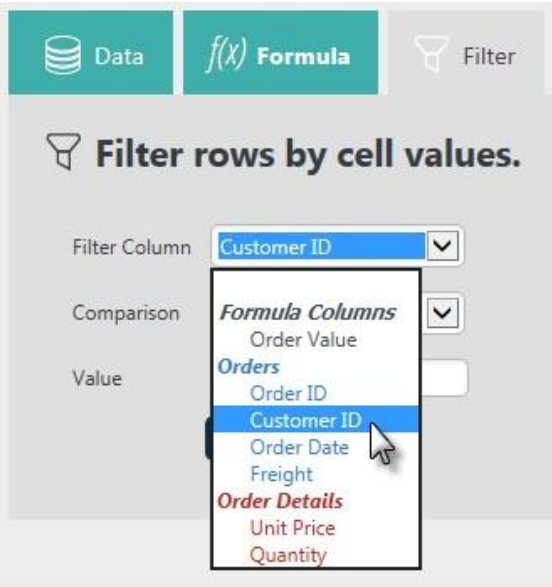
Filtering Rows

Click the **Filter** tab to use the feature that lets you *remove* Analysis table rows that don't meet your criteria.



Here's how to use this feature:

1. Select the **Filter Column** containing the values to be compared:



A shown above, you'll see that the options are grouped and color-coded to make it easier for you to identify them. If you created any Formula columns, they'll be in there, too.

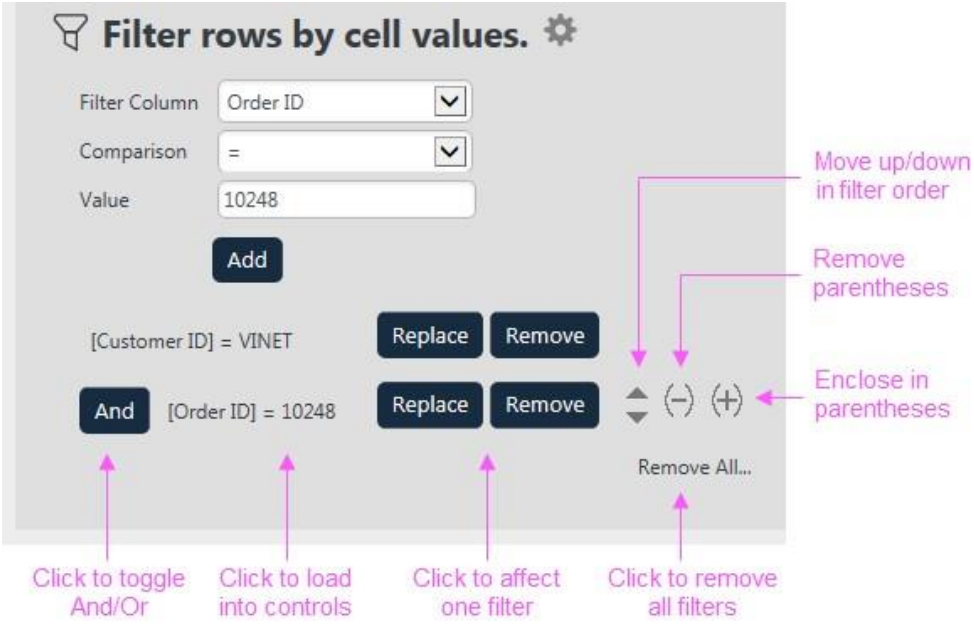
2. Set the filtering criteria by selecting a **Comparison** operator from the list.

   Comparison operators include = , <, >, < =, > =, *Not =*, *Starts With*, *Contains*, *Not Contains*, and *Does Not Start With*. If the Filter Column is a date, then *Date Range* is available and some other options are not. The *Starts With* and *Contains* operators are useful for finding values at the beginning or within data and will work with both text and numeric data. The *Not Contains* and *Does Not Start With* operators work in the opposite manner.

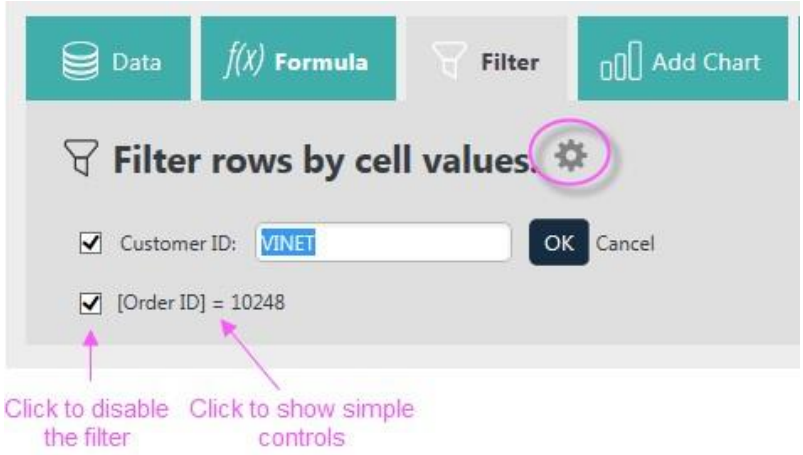
   Depending on the comparison chosen, additional input controls may be displayed, for example, for date ranges.

3. Enter a comparison **Value.** Wildcard characters (*, %) are *not* allowed in these values. Click **Add**. Rows that don't meet these criteria will be removed from the table.

4. As filters are created, they're added to the filter list. Use the adjacent **Replace** and **Remove** buttons to manage the list.



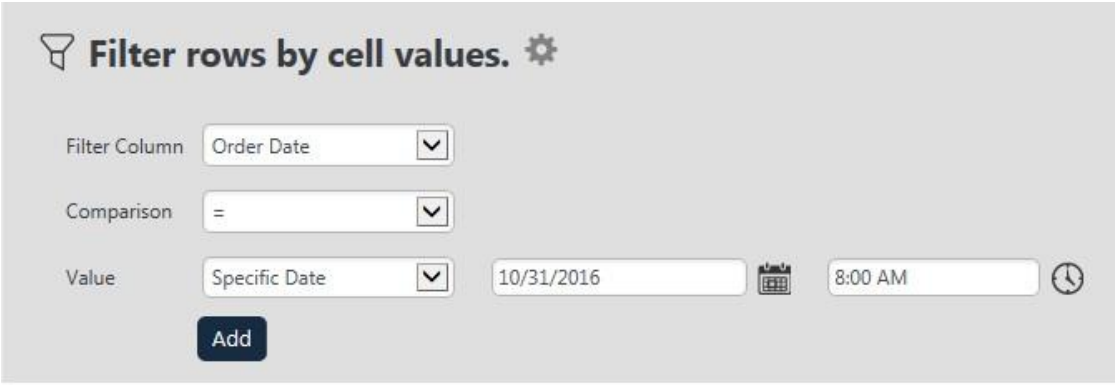
If you add multiple filters, initially rows that meet *all* the conditions will be retained (an "And" situation). Clicking the *And* link in the Filters list, shown above, changes it to an *Or* link, so rows that meet *any* of the conditions will be retained. A set of four arrow icons will also appear by the Remove button. These can be used to re-order the precedence of the filters or to group them together in various arrangements using parentheses.



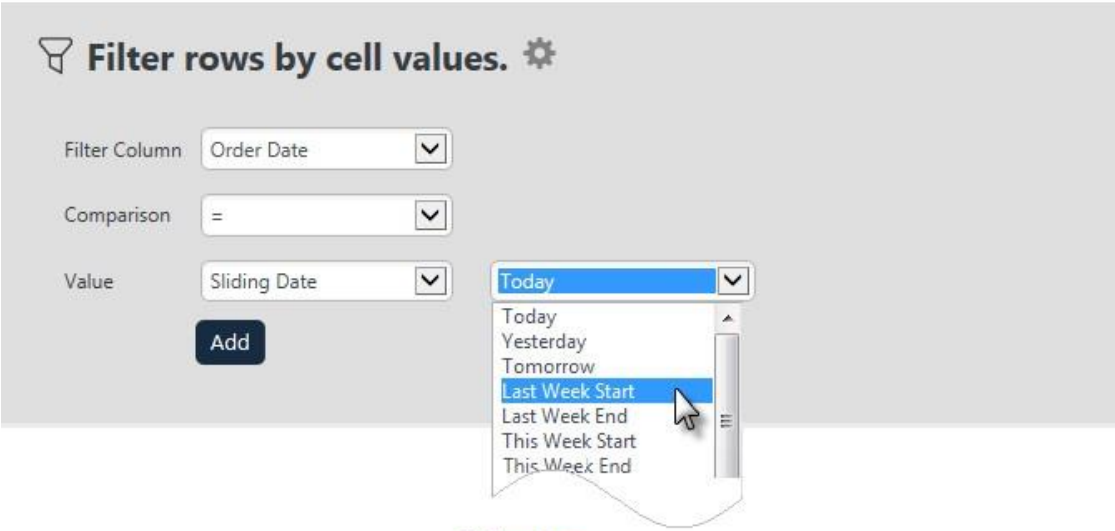
Once filters are configured, you can use the Gear icon to collapse the Filter configuration area, as shown above. Checkboxes and filter descriptions will remain visible in the area. Uncheck a checkbox to disable a filter. If you click the description text, simple controls will appear, allowing you to change the filter value.

Filtering by Dates

If the Filter Column selected is a **Date type** column, the interface presents different value controls:

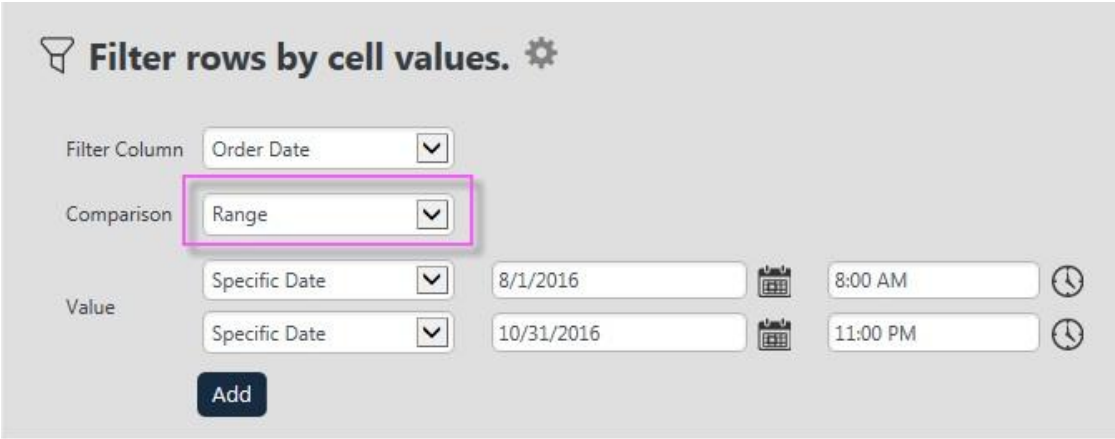


Specific Date

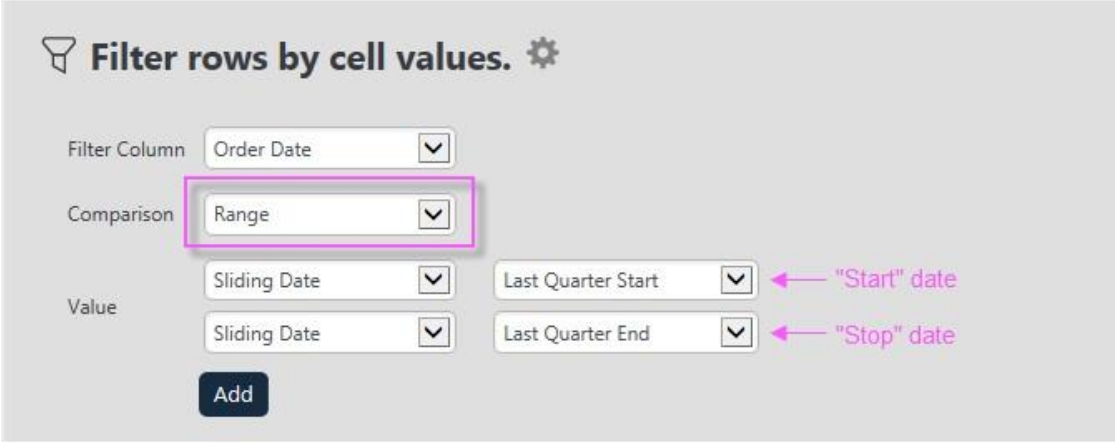


Sliding Date

You may choose to filter on a **Specific Date** and either type it in or select it from a pop-up calendar. Or, as shown above, right, you can filter using a **Sliding Date** value and select from a long list of relative dates (*Last Week End, Last Month Start*, *90 Days Ago*, etc.)



Specific Date Range



Sliding Date Range

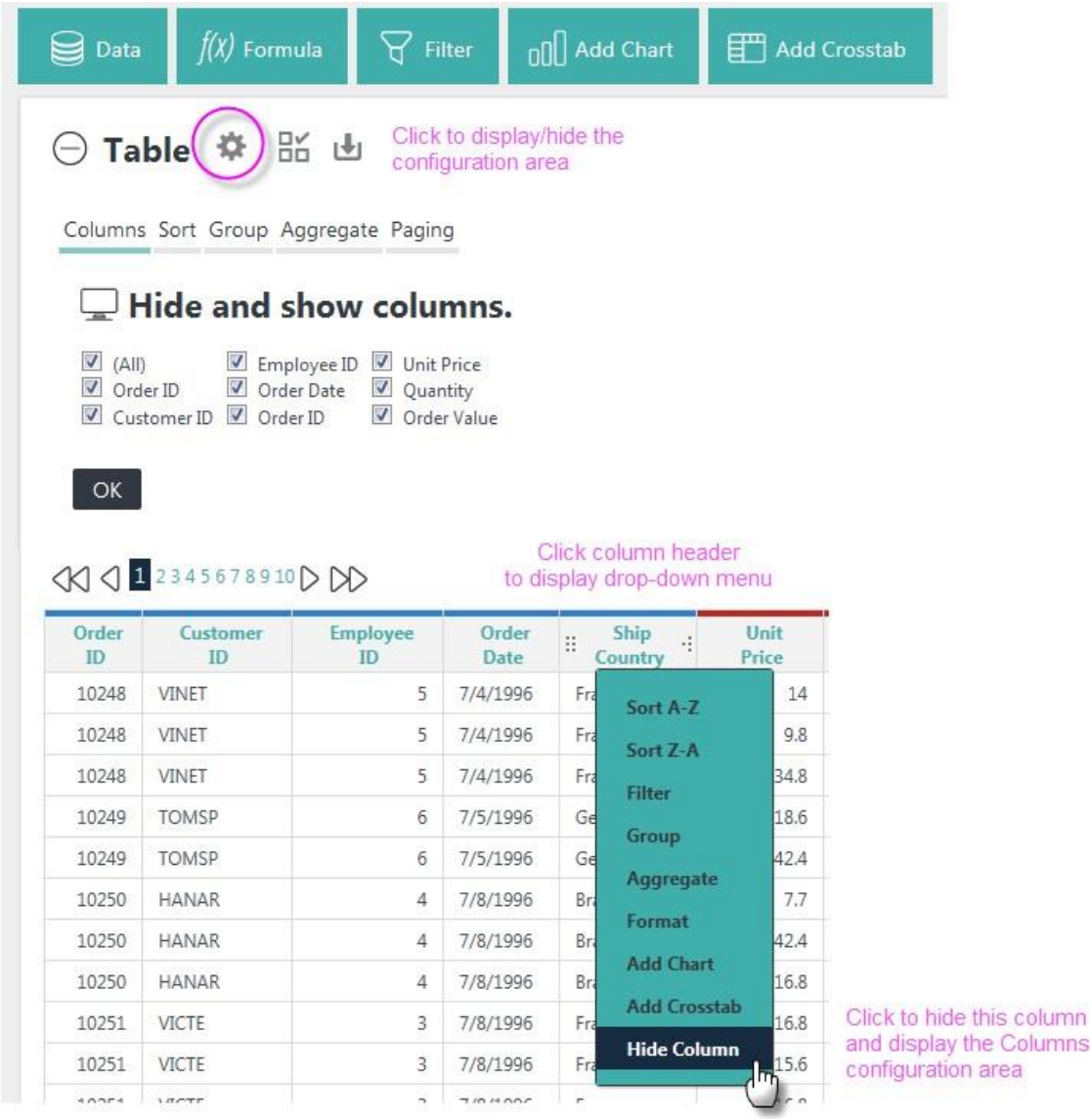
If the Comparison option *Date Range* is chosen, as shown above, different value controls for Starting and Ending dates, which can be used in a variety of combinations are displayed.

You can also use a combination of specific and sliding date comparisons.

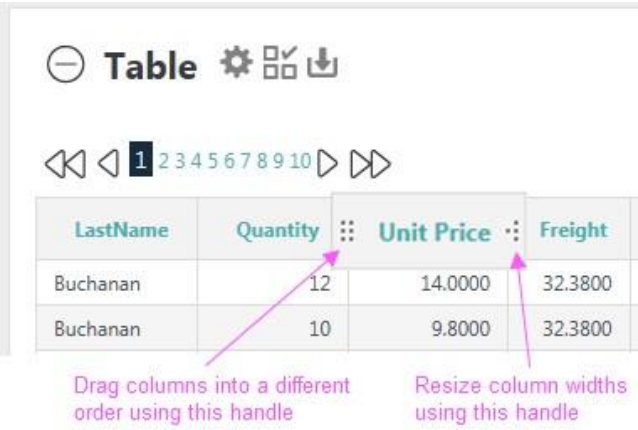
When done, click the **Filter** tab to hide the panel.

Showing, Hiding, and Moving Columns

You've selected which data columns to *include* in your working dataset but you may not want to *see* them all. The **Columns** feature in the Table configuration area, which can be displayed by clicking the Gear icon or by clicking any table column header, controls column display:



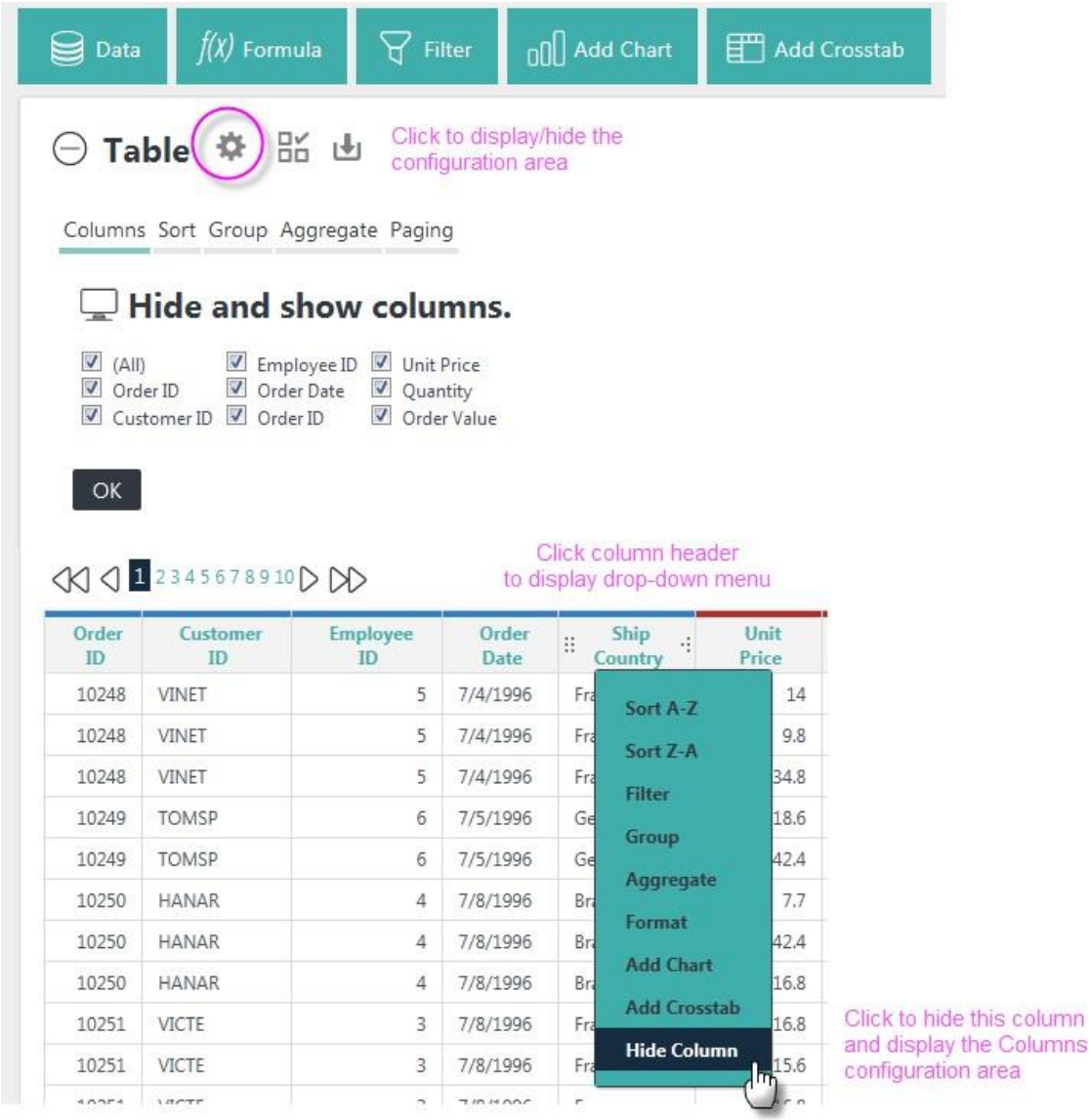
As shown above, you can remove a column from the table by un-checking it. The **(All)** checkbox makes working with lots of columns easier, and you'll need to click **OK** to refresh the table with any changes. Click the Gear icon again to hide the configuration area.



You can also rearrange the order, and change the widths, of table columns using two "drag handles" that appear when you hover your mouse over a column header, as shown above.

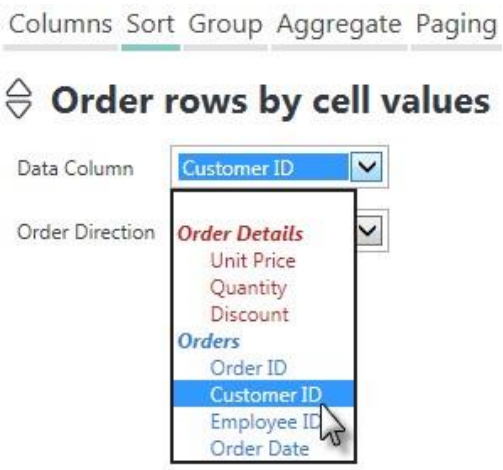
Sorting Rows

This feature allows you to set the *sort order* of the table column data. You can display the **Sort** configuration area by clicking the Gear icon and then the **Sort** item, or by clicking any table column header and selecting a Sort option from the pop-up menu.



Here's how to use this feature:

1. Select a **data column** to sort:

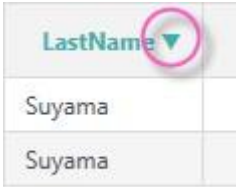


You'll see that the options are grouped and color-coded to make it easier for you to identify them. If you created any Formula columns, they'll be in there, too.

2. Select a sorting **order direction** - ascending or descending. Click **Add** to add the sort and refresh the table. The table will immediately be updated with the new sort. Repeat as desired for additional sorting.

3. As Sort Order columns are created, they're added to the list of sorts. Use the adjacent **Replace** and **Remove** buttons to manage the list.

The Analysis table columns will be displayed in the sort order you specify. It's still possible to sort based on individual columns later, by clicking their column titles. Click the Gear icon to hide the configuration area.

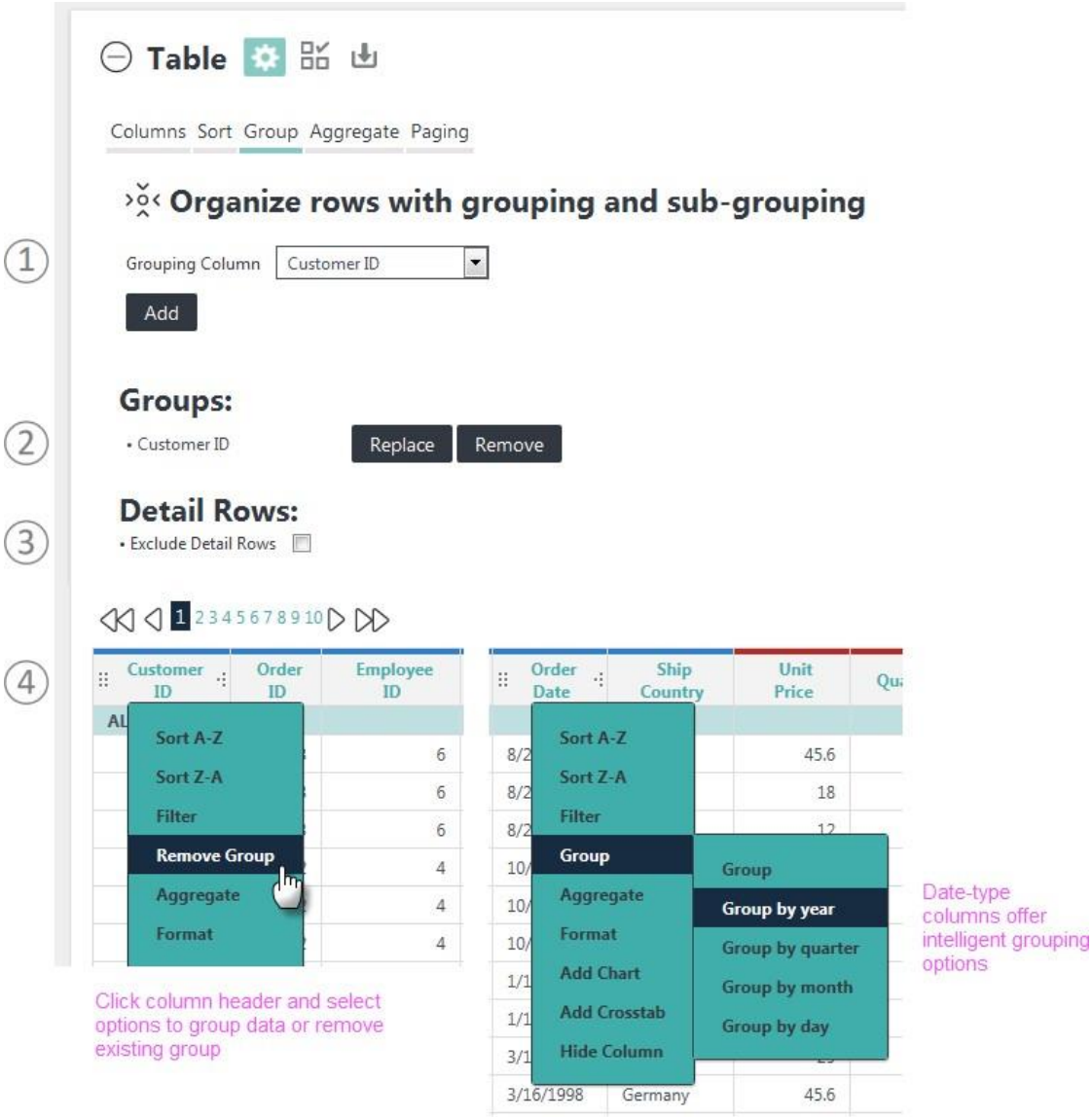


If your application has been configured for it, an arrow, shown circled above, will appear beside the column header text to indicate that a sort is in effect and to show its order/direction.

Click the Gear icon to hide the configuration area.

Grouping Rows

The **Group** feature in the Table configuration area, which can be displayed by clicking the Gear icon or by clicking any table column header, lets you group table rows:



Here's how to use this feature:

1. Select the **Grouping Column** for the first level of grouping from the list of columns. Depending in the column's data type additional input controls may be displayed. Click **Add** to group the data and refresh the table. Repeat as desired to create sub-groups.

2. As groups and sub-groups are created, they're added to the Groups list. Use the adjacent **Remove** and **Replace** buttons to manage the list.

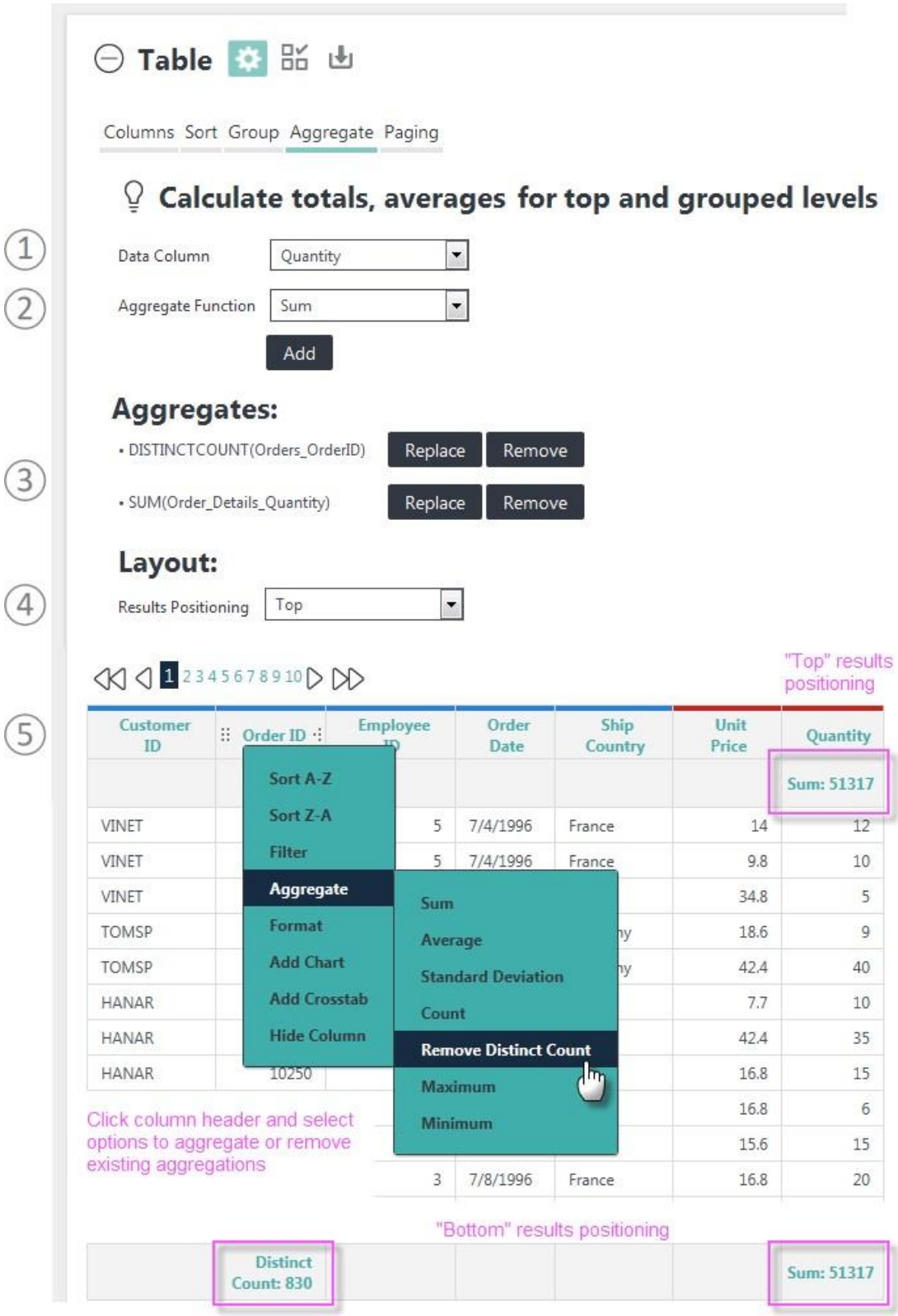
3. The **Exclude Detail Rows** checkbox can be used to hide the rows that have been grouped, "collapsing" each group into a single row in the table.

4. Grouping and un-grouping can be also be accomplished by clicking a column header in the table and then selecting the desired options from the context menu.

Click the Gear icon to hide the configuration area.

Calculating Aggregations

The **Aggregate** feature in the Table configuration area, which can be displayed by clicking the Gear icon or by clicking any table column header, lets you calculate totals, averages, and other aggregations:



Here's how to use this feature:

1. Select the **Data Column** to be aggregated from the column list.

2. Select the **Aggregate Function**. Options include: *Sum*, *Average*, *Standard Deviation*, *Count*, *Distinct Count*, *Minimum*, and *Maximum*. Click **Add** to aggregate the data and refresh the table.

3. As aggregates are created, they're added to the Aggregates list. Use the adjacent **Replace** and **Remove** buttons to manage the list.

4. Aggregate results appear in an extra table row that can be positioned at the top or bottom of the table, as shown above. If **Grouping** is in effect, aggregate values will also appear at each grouping level in the table.

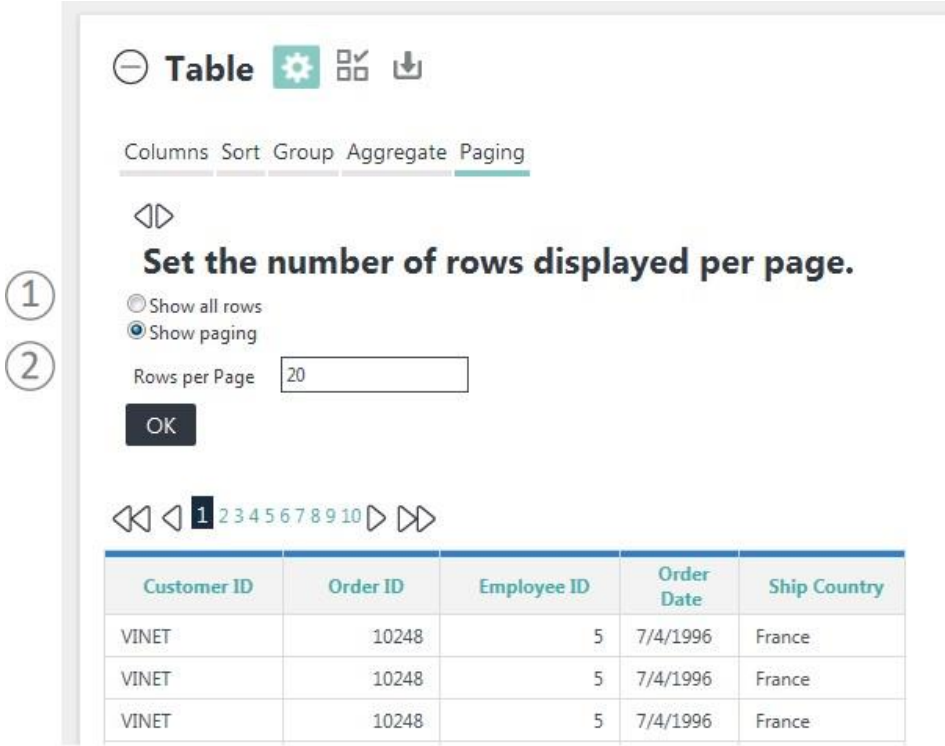
5. Aggregating can be also be accomplished by clicking a column header in the table and then selecting the desired options from the context menu.

Generally, columns with Null values are *excluded* from aggregations. However, your application may be configured to include them; check with the developer of your application for details.

Click the Gear icon to hide the configuration area.

Controlling Paging

Click the Table's Gear icon and then the **Paging** option item to control the pagination of your analysis table:



Here's what you need to do:

1. Choose a paging option:

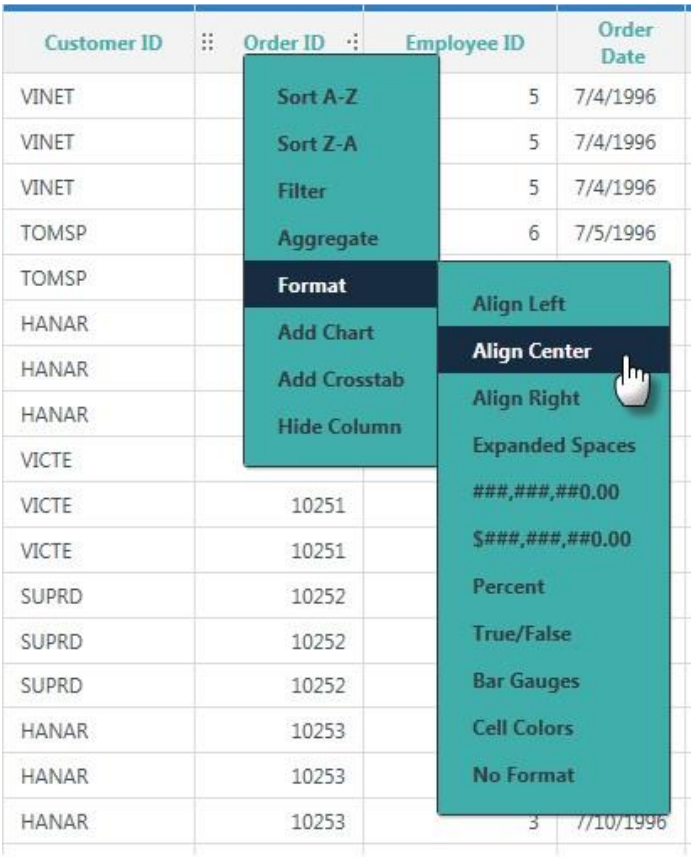
    - **Show all rows** will display all of the data at once in the table. *Caution*: Selecting all rows can result in a length delay while data is retrieved.
    - **Show paging** will display a fixed number of rows per page and display the paging controls.

2. If **Show paging** has been selected, enter the number of data rows to display per table page. Click **OK** to refresh the display.

These settings affect *all* tables simultaneously. Click the Gear icon to hide the configuration area.

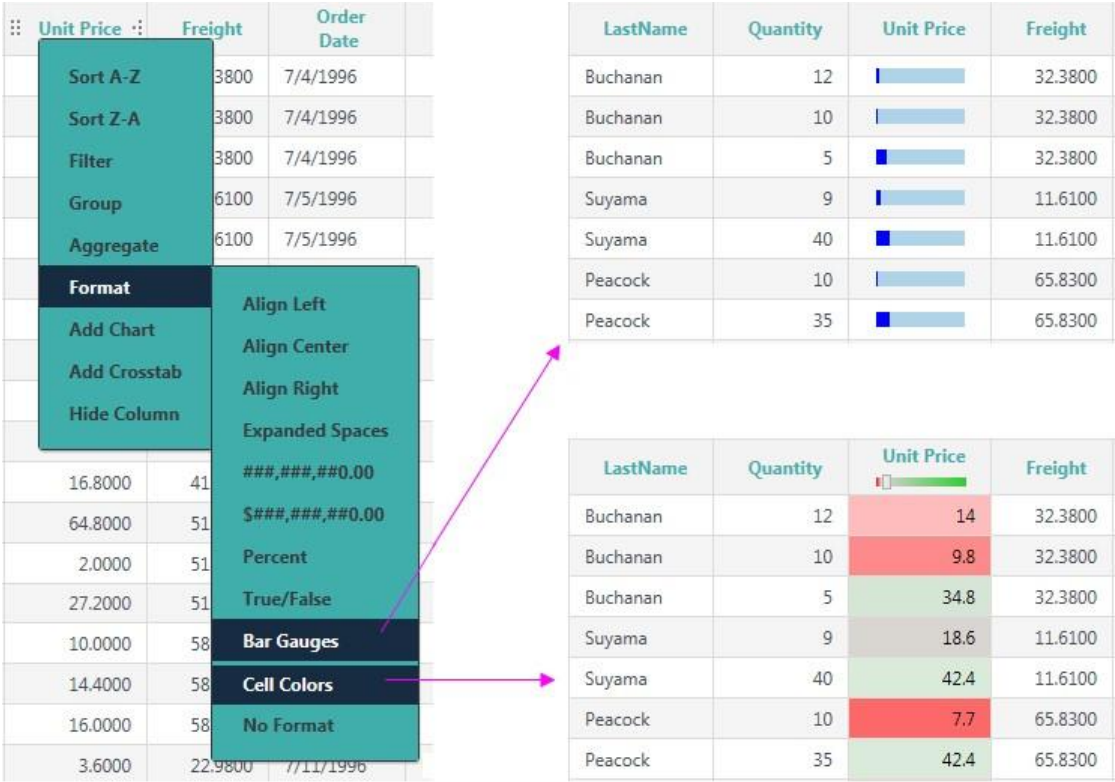
Formatting Data

You can format the appearance of the data in the Table by clicking a table column header and selecting **Format**:



These options allow you to apply, or remove, a variety of standard data formats. More information about these formats is available in our online document *Formatting Data*.

Two special format options insert visualizations right into the column:



Selecting the *Bar Gauges* option will produce a horizontal bar gauge within the column, as shown above. The actual data value will appear in a tooltip if you hover your mouse over the gauge. Selecting the *Cell Colors* option will display the column value using an imbedded Cell Color Slider, as shown above. You can drag the slider in the column header to customize the color ranges.

Creating Charts and Gauges

Click the **Add Chart** tab to use the feature that lets you create charts and gauges. A separate Chart panel with its own configuration area will be displayed:

Here's how to use this feature:

1. Click the option item for the type of chart to be created. Specific controls will be displayed, depending on the selected type.

2. Assuming a **Bar** chart was selected, select the **Label Column**. This provides data for the X-axis of the chart. If the column selected is a date-type column, an interval control (*Year*, *Quarter*, *Month*, *Day*) will be displayed.

3. Select the **Data Column** (Y-axis data, the "height" of each bar). You'll see that the options are grouped and color-coded to make it easier for you to identify them. If you created any Formula columns, they'll be in there, too. You can also choose to show the actual data values on the chart.

   - Select a **Data Aggregation** function. Options include: *Sum*, *Average*, *Standard Deviation*, *Count*, *Distinct Count*, *Minimum*, and *Maximum*. Columns with Null values are *excluded* by default from aggregations.

- Select whether or not to show the actual data values as labels within the chart.

4. The **Additional Column** specifies a second data series that will be charted along with the Data Column values for comparison. Depending on the chart type, other controls will appear for use configuring a second series, including aggregation options and charting types.

5. Data **Forecasting** is available for Bar, Line, and Curved Line charts. See the section below for more information.

6. **Relevance** allows you to tune the data to be shown. Options include *Automatic*, *Rank*, and *Percentage.*

7. **Bar Orientation** allows you to choose whether the bars are vertical or horizontal.

Depending on how your application is configured, you may see an "OK" button that applies all of your selection changes to the chart at once. Otherwise, your chart will be redrawn immediately as you make individual changes.

Hide the chart configuration area by clicking the Gear icon, or close it (delete the chart) by clicking the Trashcan icon.

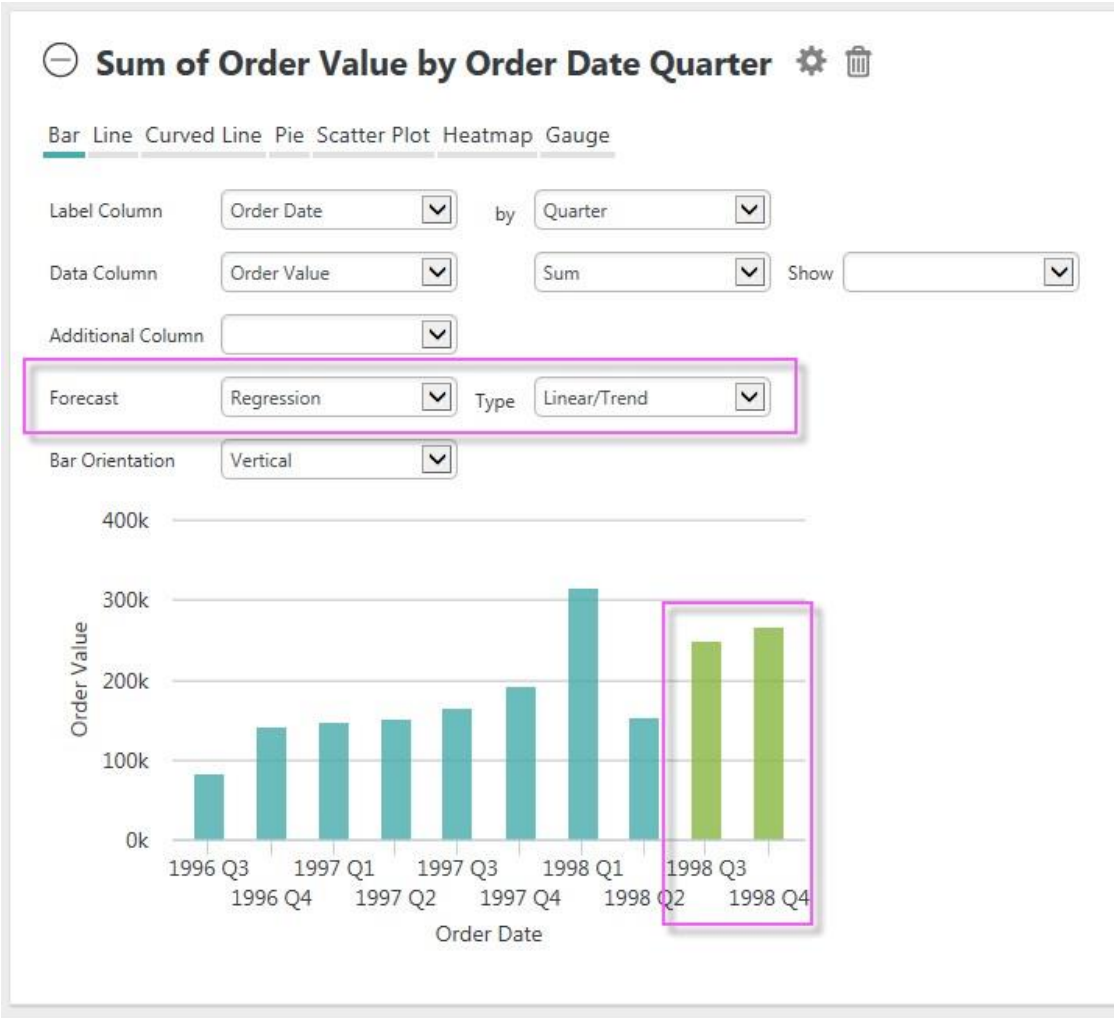
Charts are displayed in their own panels, so you can expand and collapse them using their "+" and "-" icons. You can also rearrange the order of chart and table panels by clicking with your mouse near the top of a panel, and dragging it up or down.

Charts will automatically include Quicktips, which appear when you hover your mouse over a data value, as shown above. In addition, "resizing handles" (circled above) will appear when the mouse is over the chart, allowing you to resize the chart by dragging them.

Unlike the chart shown above, Bar charts that are not time-oriented will automatically be shown in a horizontal format. This allows greater clarity in reading the "X-axis" label text.

Data Forecasting

Data Forecasting, if included by your application developer, is available for Bar, Line, and Curved Line charts.



If it's available, extra controls for it will appear in the Chart configuration panel, as shown above.

Data forecasting is the process of generating values based on events that have *not yet* occurred. "Prediction" is a similar but more general term. Forecasting refers to formal, statistical methods that use time series, crosssectional, or longitudinal data to produce predicted data. Typically, forecasts are displayed most effectively on charts.

Forecasting analysis options include:

- **Time Series** (Time Series Decomposition), consisting of data in a natural, time-related order with a strong interval, where the Label Column data is of DateTime-type and the Data Column is a number.

- **Regression**, using one of several regression analysis functions. Regression analysis is recommended when the focus is on a relationship between a dependent value and one or more independent values. Available regression analysis functions include:

    - *Linear* - used to calculate predictive values based on a trend line.
    - *Autoregressive* - used when attempting to predict an output of a system based on previous outputs. The estimation technique used is based on "Burg's" method.

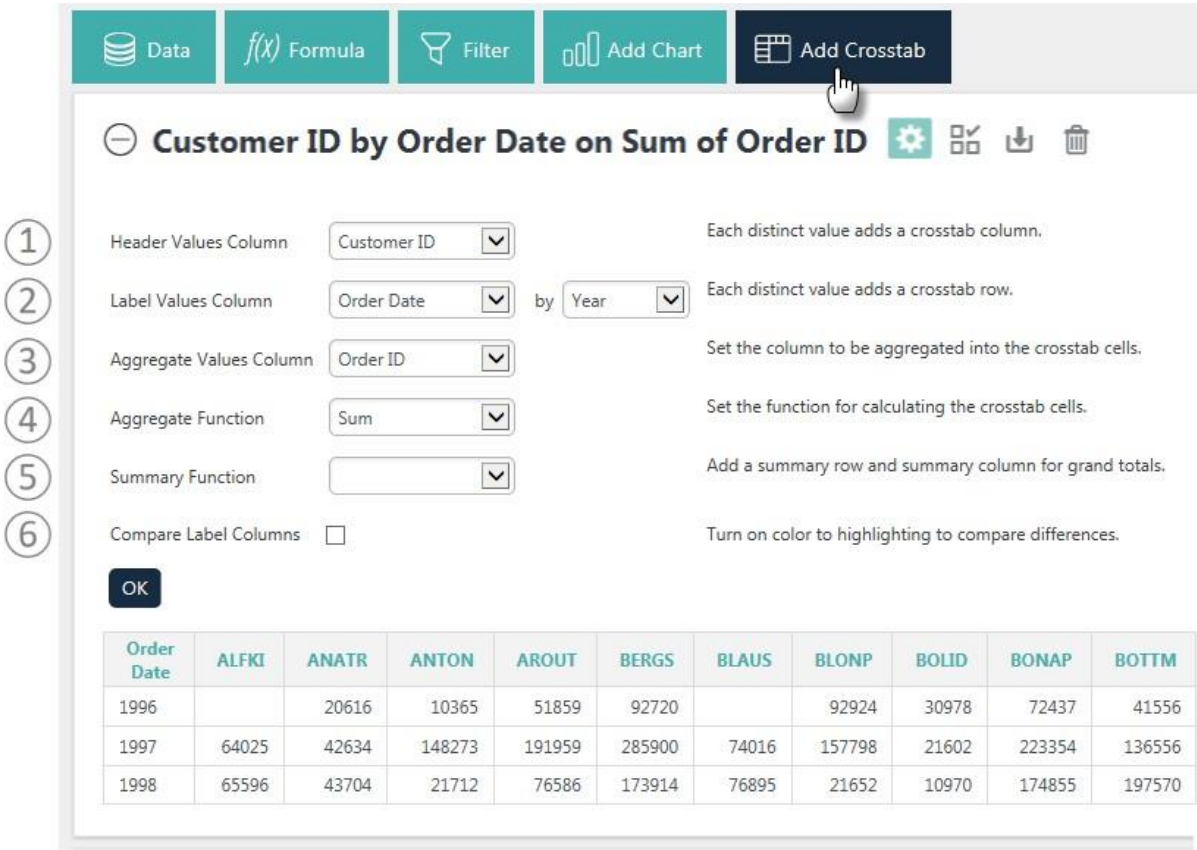
- *Exponential*, *Logarithmic*, *Polynomial*, or *Power* - non-linear types used to display the relationship between dependent and independent variables as a curvilinear function, which may provide more accuracy than a linear regression.

More information about forecasting with Logi Info can be found in online our *Forecasting Elements* document on DevNet.

Click the Gear icon to hide the configuration area.

Pivoting and Summarizing Data

Click the **Add Crosstab** tab to use the feature that lets you create a crosstab (also known as a "pivot") table:



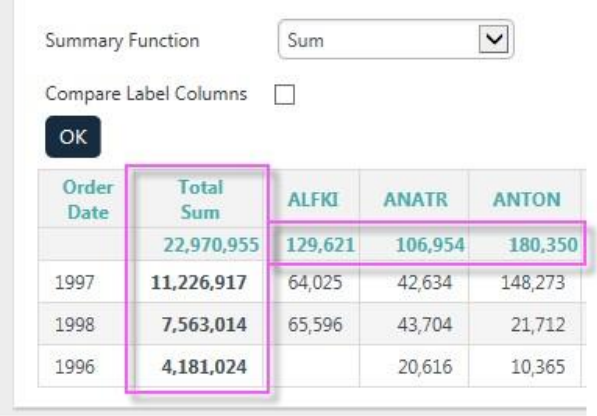
Here's how to use this feature:

1. Select the **Header Values Column**, whose values will be shown *horizontally*, as column headers, across the top of the crosstab table. Additional controls may appear depending on the data type of the selected column.
2. Select the **Label Values Column**, whose values will be shown *vertically*, in the left-most column of each row.

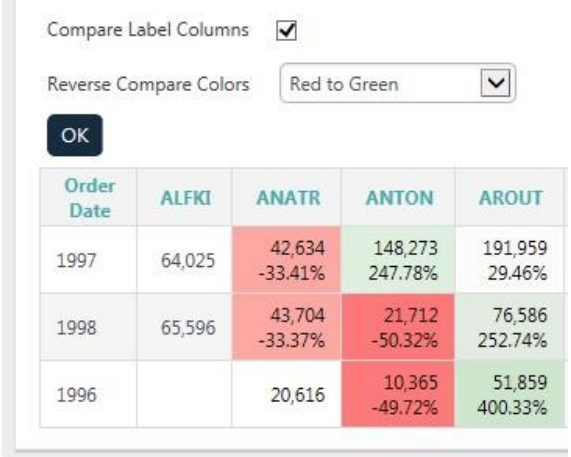
3. Select the **Aggregate Values Column**, whose values will be *aggregated* to produce the contents for the rest of the table cells.
4. Select the **Aggregate Function** to be applied to the column selected in Step 3. Options include *Sum*, *Average*, *Standard Deviation*, *Count* and *Distinct Count, Minimum,* and *Maximum.*
5. Select a **Summary Function** to display a summary result.
6. Check the **Compare Label Columns** checkbox to cause the difference between column values to be displayed, along with a cell shading indicator.

If it exists, click **OK** to generate the crosstab table, in its own panel; otherwise the table will be generated automatically as you make changes.

The Summary Function and Label Column Comparison features provide interesting ways to analyze the data:



Using a Summary Function



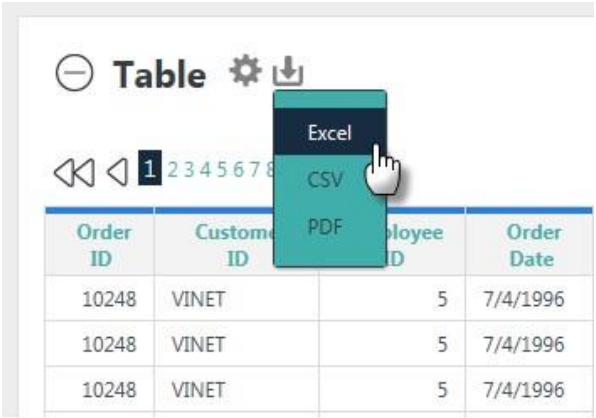
Comparing Label columns using color

As shown above, summarizing the data totals the rows and columns, inserting a row and column to display the results. Comparing Label columns can produce color spectrum backgrounds or directional arrows, and can display the value differences as values or percentages, in the cells.

Click the Gear icon to hide the configuration area.

Exporting Data

Analysis tables include three **Export** functions, available by clicking the Export icon:



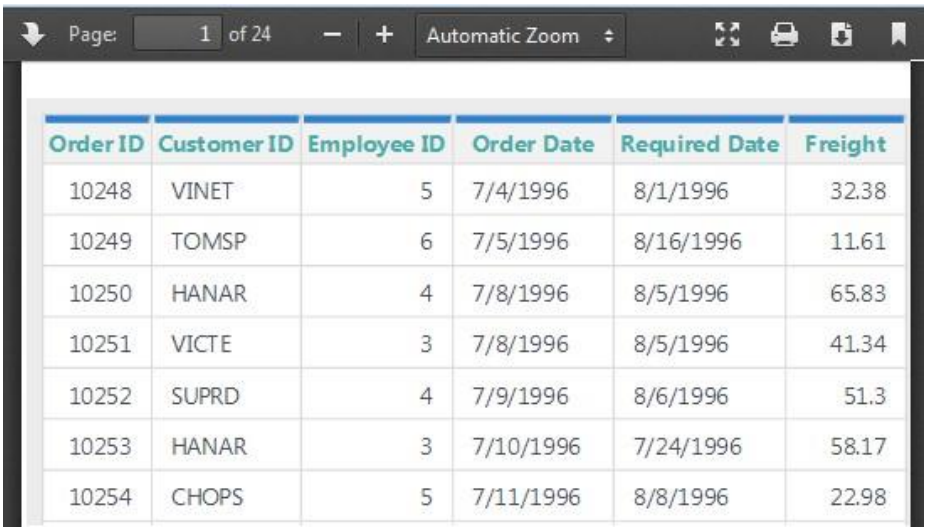
Depending on your application's configuration, you may see some, all, or none of the Export options shown above. When present, they allow you to export the table's data, as follows:

	A	B	C	D	E	F
1	Order ID	ustomer I	mployee I	Order Date	equired Da	Freight
2	10248	VINET	5	7/4/1996	8/1/1996	32.38
3	10249	TOMSP	6	7/5/1996	8/16/1996	11.61
4	10250	HANAR	4	7/8/1996	8/5/1996	65.83
5	10251	VICTE	3	7/8/1996	8/5/1996	41.34
6	10252	SUPRD	4	7/9/1996	8/6/1996	51.3
7	10253	HANAR	3	7/10/1996	7/24/1996	58.17
8	10254	CHOPS	5	7/11/1996	8/8/1996	22.98

Excel - The data is exported into an Excel .xlsx or .xls file, as raw data. The file can be viewed in Excel (if installed on your computer) or can be saved to your file system. Analysis table column headers are exported into the first row of the Excel worksheet, numbers are exported as text, and the data is not formatted. No specific worksheet column widths set.

```
"Order ID","Customer ID","Employee ID","Order Date","Required Date","Freight"
"10248","VINET","5","7/4/1996","8/1/1996","32.38"
"10249","TOMSP","6","7/5/1996","8/16/1996","11.61"
"10250","HANAR","4","7/8/1996","8/5/1996","65.83"
"10251","VICTE","3","7/8/1996","8/5/1996","41.34"
"10252","SUPRD","4","7/9/1996","8/6/1996","51.3"
"10253","HANAR","3","7/10/1996","7/24/1996","58.17"
"10254","CHOPS","5","7/11/1996","8/8/1996","22.98"
```

CSV - The data is exported into a .csv file, as raw data. The file can be viewed in Notepad (or any text editor) and in Excel (if installed on your computer) or can be saved to your file system. Analysis table column headers are exported into the first row. All fields are enclosed in double-quotes and separated by commas.

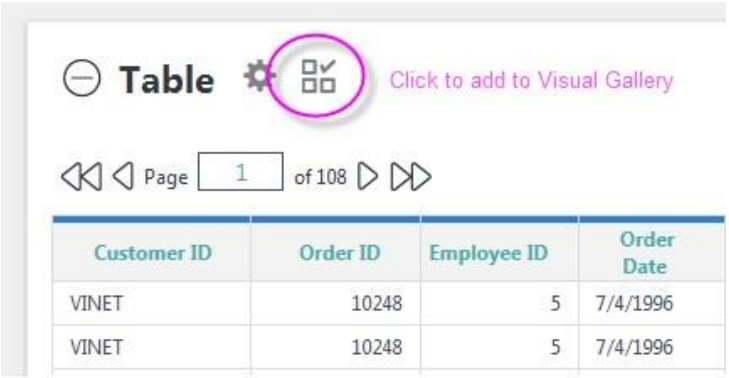


Order ID	Customer ID	Employee ID	Order Date	Required Date	Freight
10248	VINET	5	7/4/1996	8/1/1996	32.38
10249	TOMSP	6	7/5/1996	8/16/1996	11.61
10250	HANAR	4	7/8/1996	8/5/1996	65.83
10251	VICTE	3	7/8/1996	8/5/1996	41.34
10252	SUPRD	4	7/9/1996	8/6/1996	51.3
10253	HANAR	3	7/10/1996	7/24/1996	58.17
10254	CHOPS	5	7/11/1996	8/8/1996	22.98

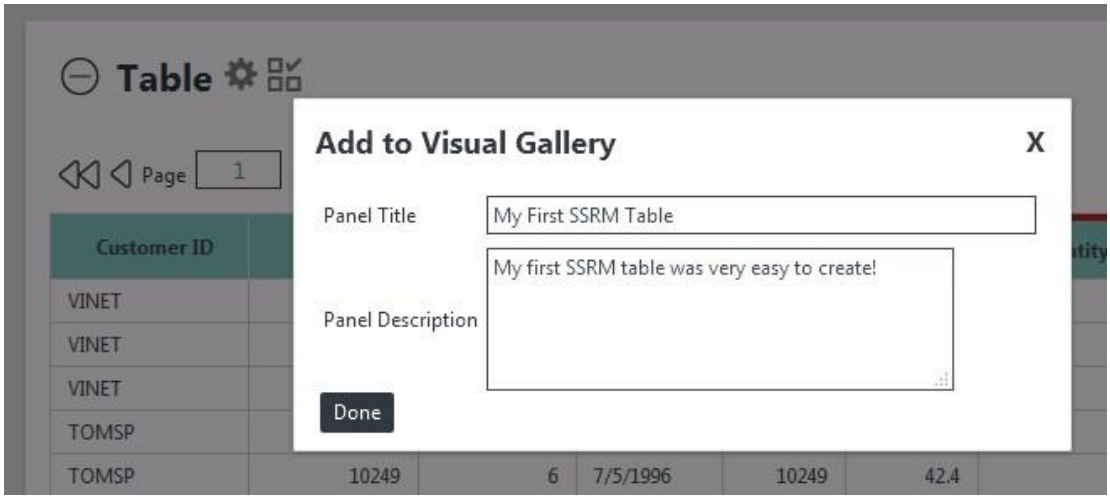
PDF - An image of the table is exported into a temporary .pdf file. This file can be viewed in your browser using the Adobe Acrobat plug-in, similar plug-ins, or, in some cases, native browser technology. Viewers usually let you save the export as a file, if desired, or print it. Table headers will be displayed at the top of each PDF page.

Adding to Your Visual Gallery

As you created tables and charts, you probably noticed that each included an **Add to Visual Gallery** button.



Customer ID	Order ID	Employee ID	Order Date
VINET	10248	5	7/4/1996
VINET	10248	5	7/4/1996

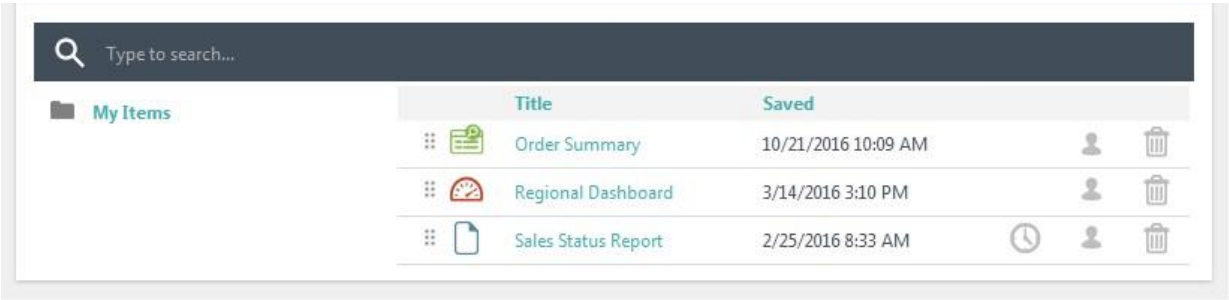


When you click the icon, you'll be prompted for a title and description. These, and a thumbnail image of your visual, are stored in your personal Visual Gallery.

You can see and manage your Visual Gallery when using either of the Home page Design options. You use the visuals from your gallery when creating Dashboards, the topic of the next sections, and Reports.

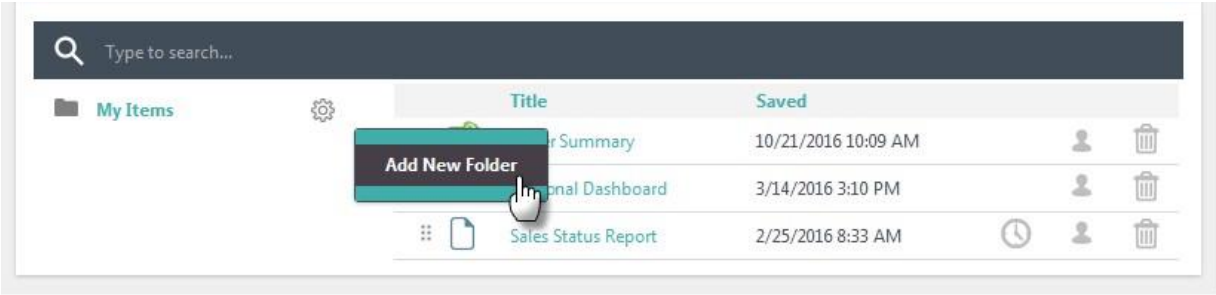
Organizing Work in Folders

Once you create an Visual analysis, analysis, dashboard, or report, it appears as an item in the list on the Medusa Analytic Home page:

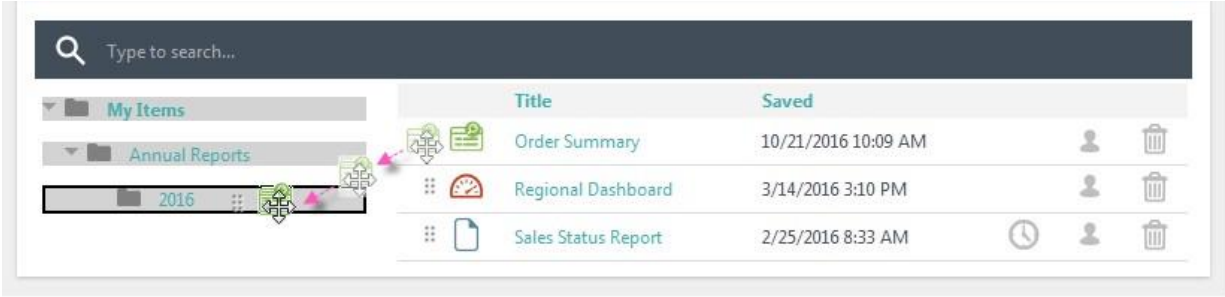


List items include icons at the right end that allow you to schedule, share (both discussed later), or delete the item, as shown above.

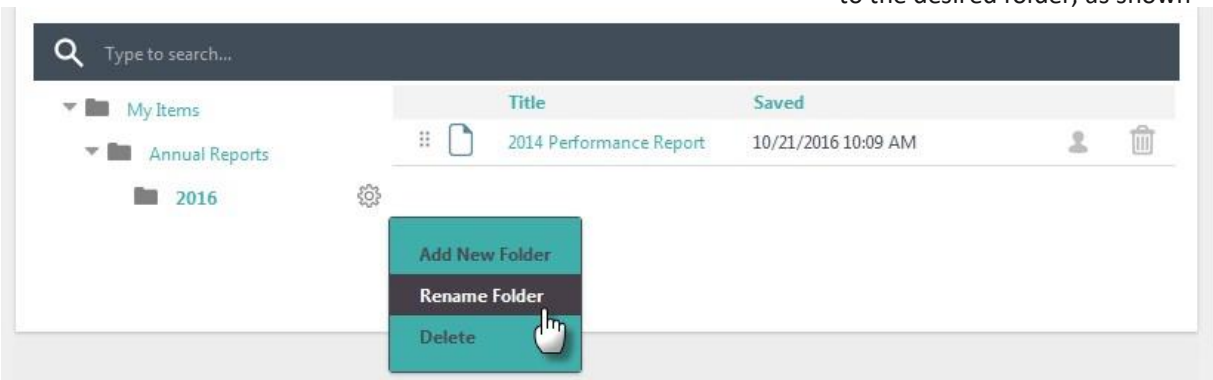
The items have been have been automatically filed in a folder called **My Items**, which you can see on the left above. This is your private folder and may be all the organization you need.



However, you can create *sub-folders* and move your items into them, for more organizational flexibility. As shown above, hovering the mouse cursor over a folder entry will cause a Gear icon to appear and clicking it will let you add a new folder beneath it.



-to the desired folder, as shown



In the example above, we've added two levels of sub-folders. Click a folder to see what's in it. Click its "gear" icon to create sub-folders, rename the folder, or delete it and its contents.

To move an item from one folder to another, just drag its "drag" icon - above.
Then click the destination folder to see the moved item.

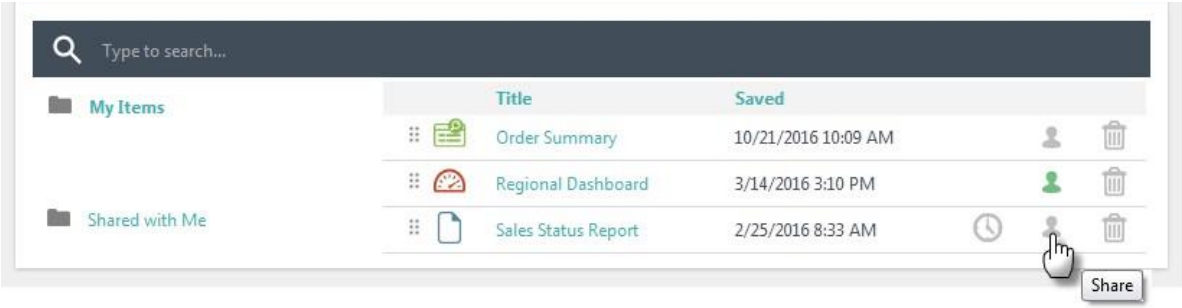
You can even drag a folder (and all its contents) into another folder, as shown above.

Sharing Your Work

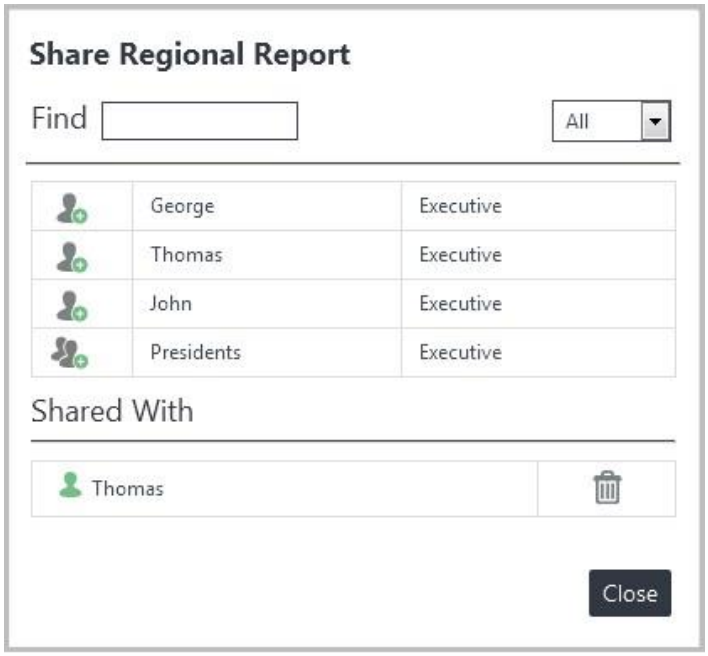
You may want to *share* your work with other Medusa Analytic users.

Sharing Individual Items

Individual reports, dashboard, and analyses that appear in your folders can be shared.



In the list of items in a folder, each item has a "Share" icon. A gray Share icon means the item has not been shared with anyone, and a green one means it has been. Click the icon to manage sharing.



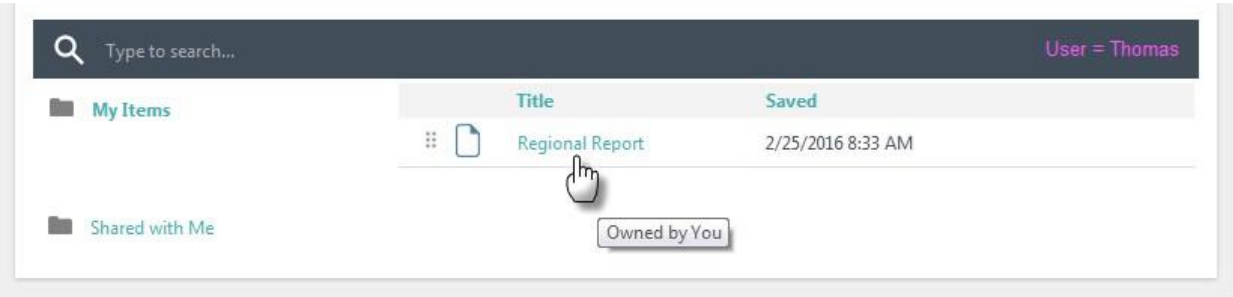
In the Share panel, shown above, you select users to share this item with. You can see this item has already been shared with user "Thomas".

Using the drop-down filter control, you can filter the list to see *Groups*, *People*, or *All* users with whom you can share this item.

Depending on how the application has been configured, you may or may not see a list of users like the one above. If not, start typing a name in the Find text box and matching user names will be displayed for you.

Click the icon by a name or select a name from the suggestions to share this item with them. Repeat as necessary for each user.

Click the Trashcan icon to stop sharing it with someone.



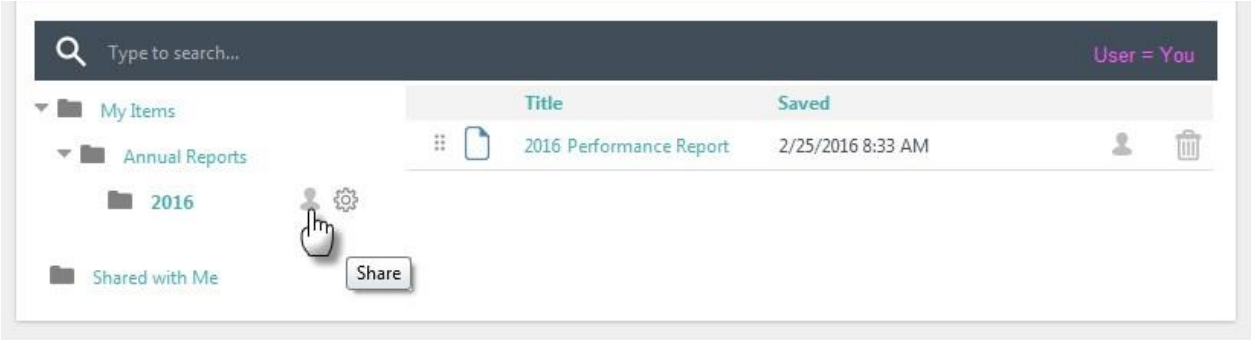
Items that are shared with someone else (or with you) will be in their **Shared with Me** folder. Click it to see its contents.

For example, the user Thomas would see the report we shared with him earlier. If he hovers his mouse cursor over the item, he'll be able to see who shared the item with him, as shown above.

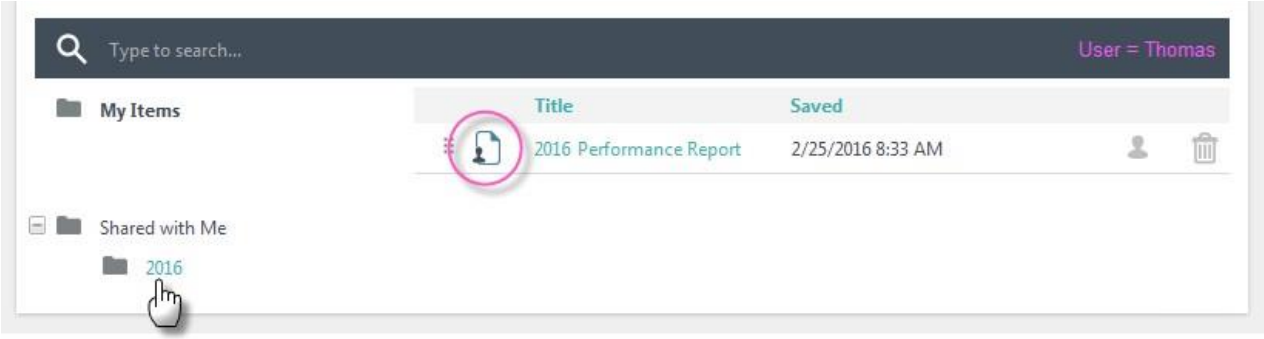
Unless you've been given a special role as a "Report Manager", you can't *edit* items that have been shared with you. You can, however, open them and use the item's Gear menu to duplicate it. This will save a copy of it to your My Items folder and you can open and edit the copy.

Sharing Entire Folders

In much the same way, you can share entire folders and their contents.



If sharing is enabled, folders will have a Share icon, too, and clicking it will allow you to share it. The same icon colors (gray = not shared, green = shared) apply here. If you shared the "2016" folder with user "Thomas", then...



... *he* would see the folder and its contents, as shown above. Notice that the item's icon indicates that it's shared. Any new items you moved into your 2014 folder later on would also show up in his shared 2014 folder.

Finally, you can also drag a folder from the **Shared with Me** folder into one of your folders. This creates a "folder shortcut" with a special icon, as shown above, which can save you the trouble of having to drill-down through many levels of shared folders to get to a folder you use often.

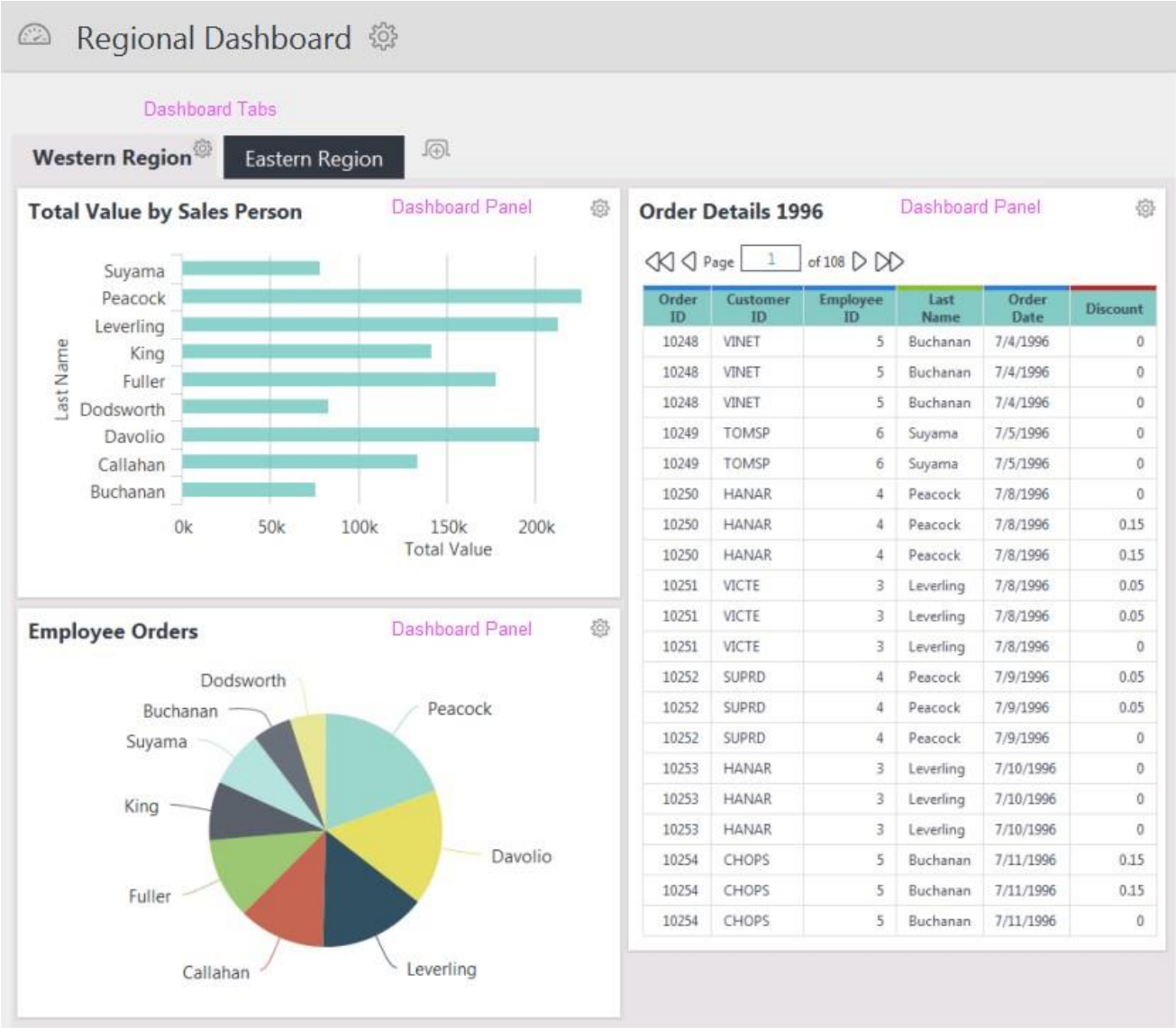
Editing Shared Content

You and other users who have been given a specific security role can edit a report or dashboard shared with you by others. Users with this role can access the underlying dashboard or report visualizations that are shared with them and make changes. When the changes are saved, the updated visualizations will be visible to anyone with whom the dashboard or report has been shared.

This provides a shared approach to authoring, wherein a user can create a visualization and an administrator or power user can update it to meet corporate standards and then "promote" it for consumption by everyone.

Dashboard

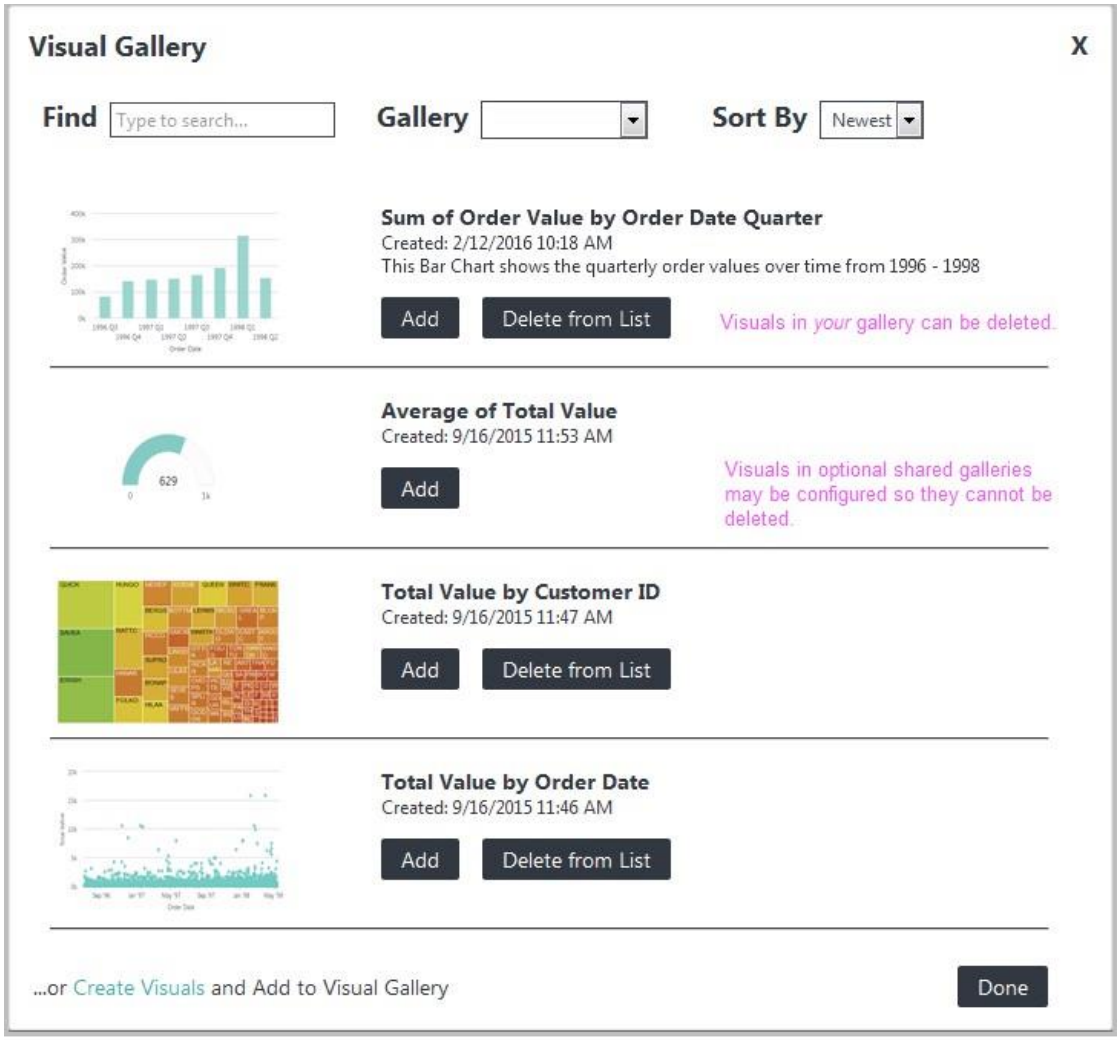
An Medusa Analytic dashboard consists of a collection of visuals (charts, gauges, and tables):



They're placed into dashboard **panels** and, if your application is configured for it, can be grouped on dashboard **tabs**, as shown above.

Adding Dashboard Visuals

When you create a new dashboard, or when you change tab settings, your Visual Gallery will be displayed:



As you can see above, it's a collection of all of the visuals you've saved in the gallery. You can recognize them from their thumbnail images, and from the titles and descriptions you entered when saving them.

The **Find** control lets you filter the displayed visuals by typing in the full or partial title of a visual, and the **Sort** control lets you set the display order of the visuals by *Newest* or *Oldest*, or by *Title* alphabetically.

If your application has been configured for *multiple* galleries, at first you'll see *all* of their visuals combined into one big collection. You'll also see the **Gallery** selection list, which allows you to filter the displayed visuals by gallery.

Each visual has an **Add** button that adds it, as a new panel, in the dashboard. You can add several new panels, one after another, if desired. Once a visual has been added, its button disappears and "Added" is displayed.

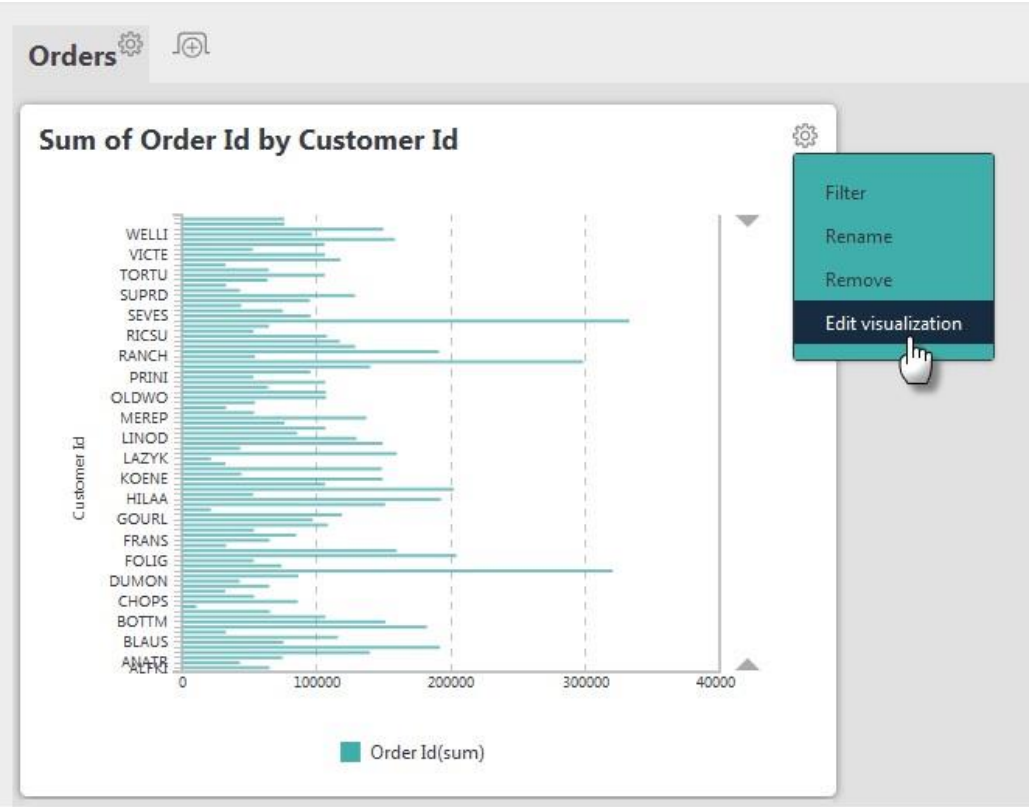
Panels can be removed from the dashboard using a control on the panel itself (see later section). If a panel is removed, its visual will appear in the gallery with its Add button displayed again.

Each visual from *your* gallery also has a **Delete from List** button, which deletes it from the gallery. If multiple galleries are in use, visuals from them may or may not have this button, depending on whether their creator configured the gallery to be "read-only".

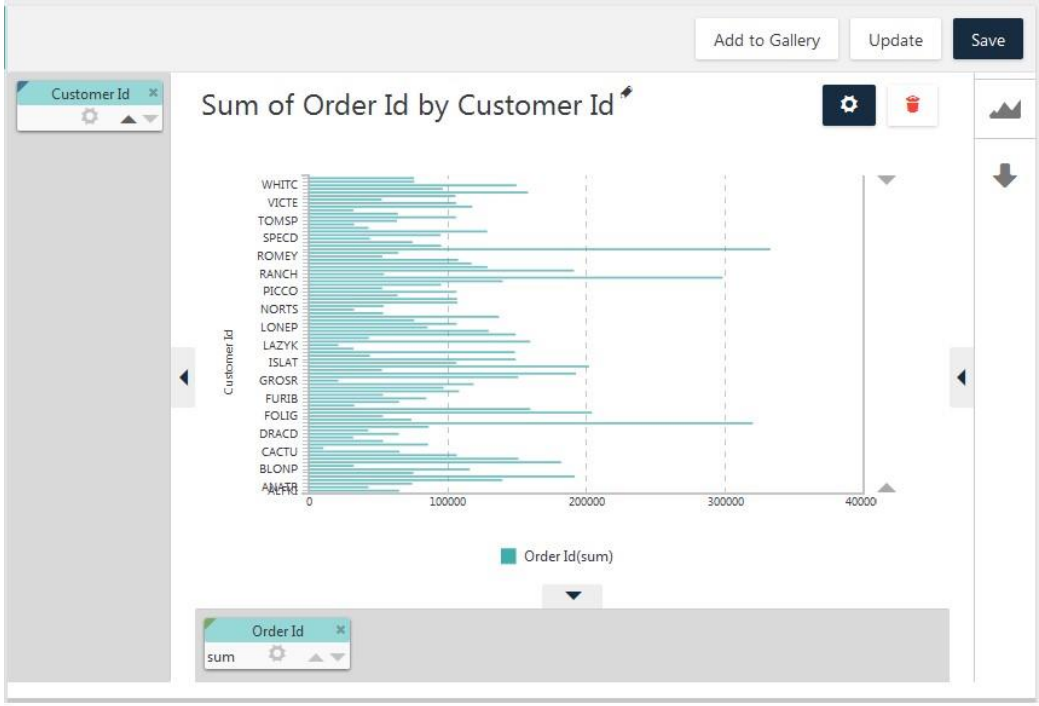
Use the **Done** button to close the Visual Gallery.

Editing Visuals

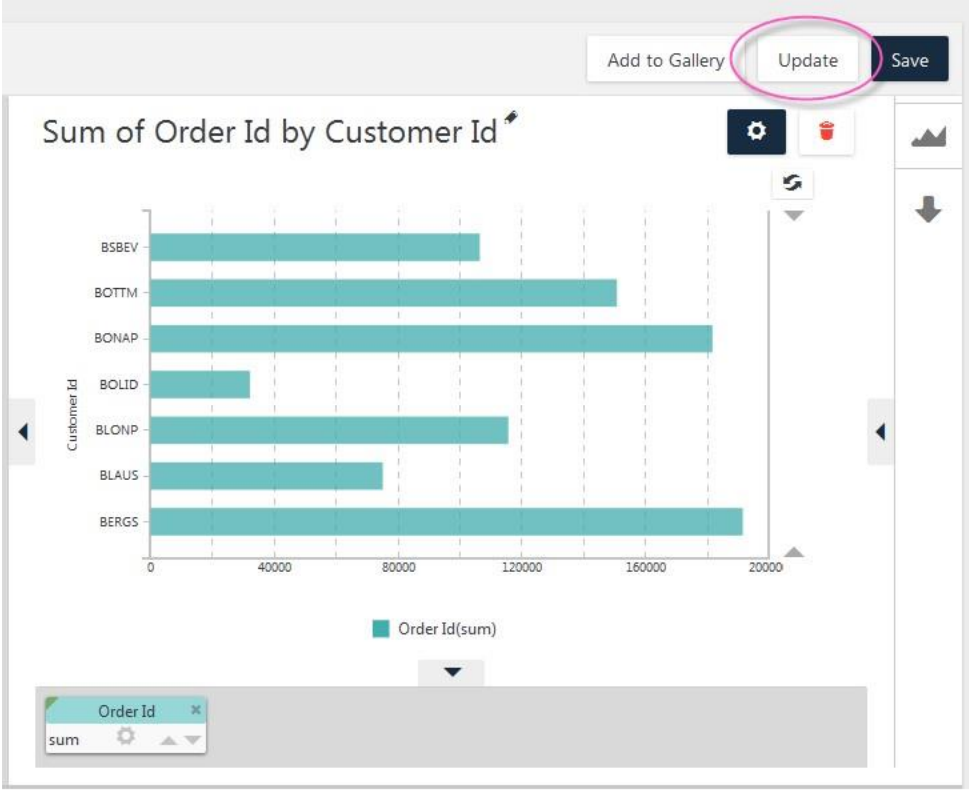
You can **edit** visuals generated by *Thinkspace analyses* directly from their dashboard panels.



For example, you can click the dashboard panel's Gear icon and select the "Edit visualization" menu option, as shown above.

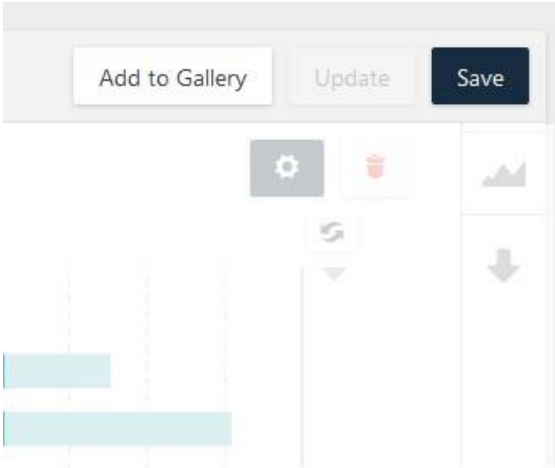


The Thinkspace will be displayed, with the dashboard panel's visual loaded into it, as shown above.



You can then make changes to the visual. In the example above, we filtered the data down to Customer IDs that start with "B". Click **Update** to save your changes and return to the dashboard…

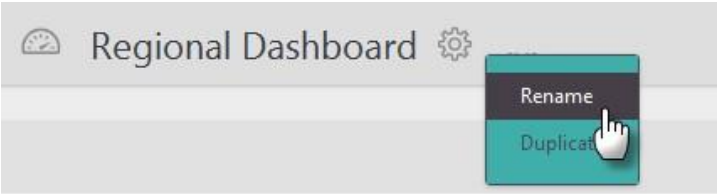
... where, as shown above, the dashboard panel will be refreshed with the edited visual.



When you're editing the visual in the Thinkspace, depending on how your application is configured, you may also have the option to add the edited version to your Visual Gallery and/or to save it for use in a later session, using the two buttons shown above

Dashboard Settings

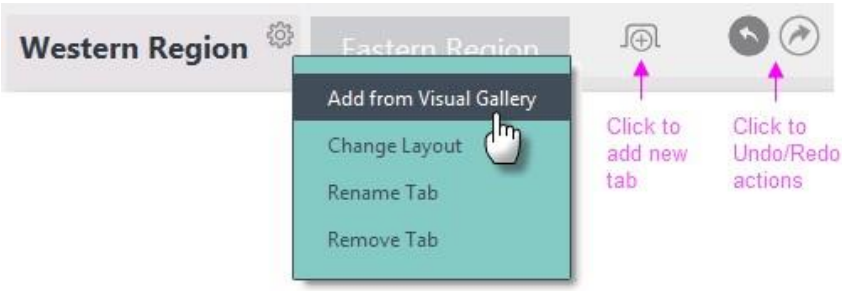
Dashboard settings are configured by clicking the gear icon next to the dashboard title:



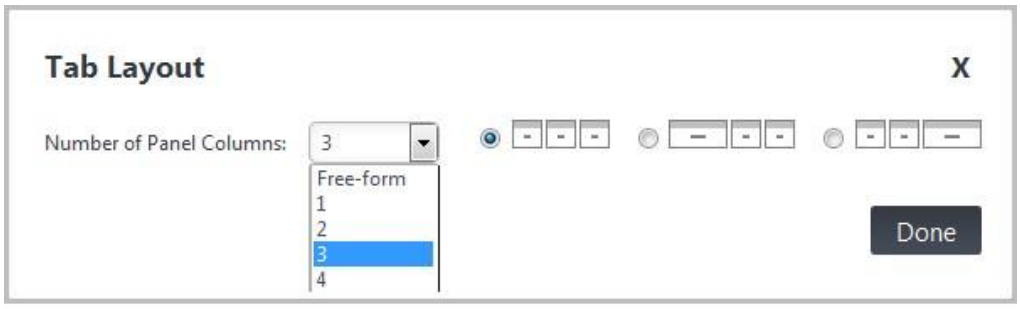
The available options, shown above, allow you to change the dashboard title, or to save a copy of the dashboard into your My Items folder.

Tab Settings

Dashboard Tab settings are configured by clicking the Gear icon next to the active tab title:



The available options, shown above, allow you to add visuals from the Visual Gallery, change the panel layout, rename the tab, or remove it altogether. Nearby icons let you add a new tab and undo/redo actions.

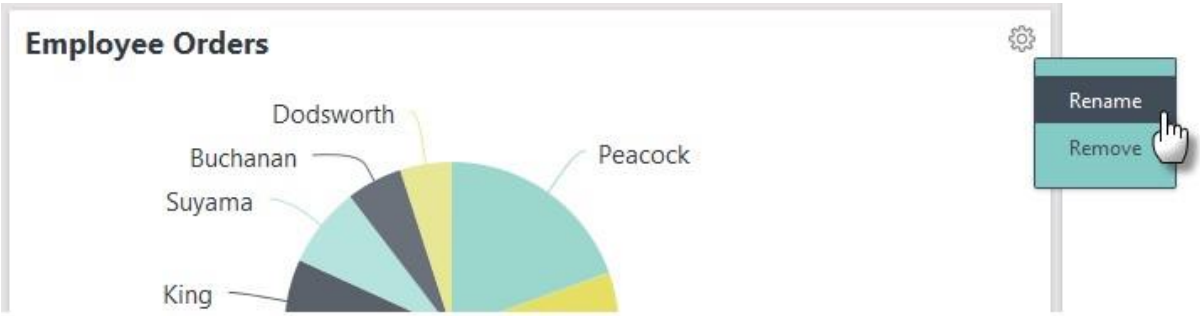


The Tab Layout, by default, is three columns of equal width, as shown above. Panels will fit into one of these columns. You can select up to eight columns, in equal and unequal widths.

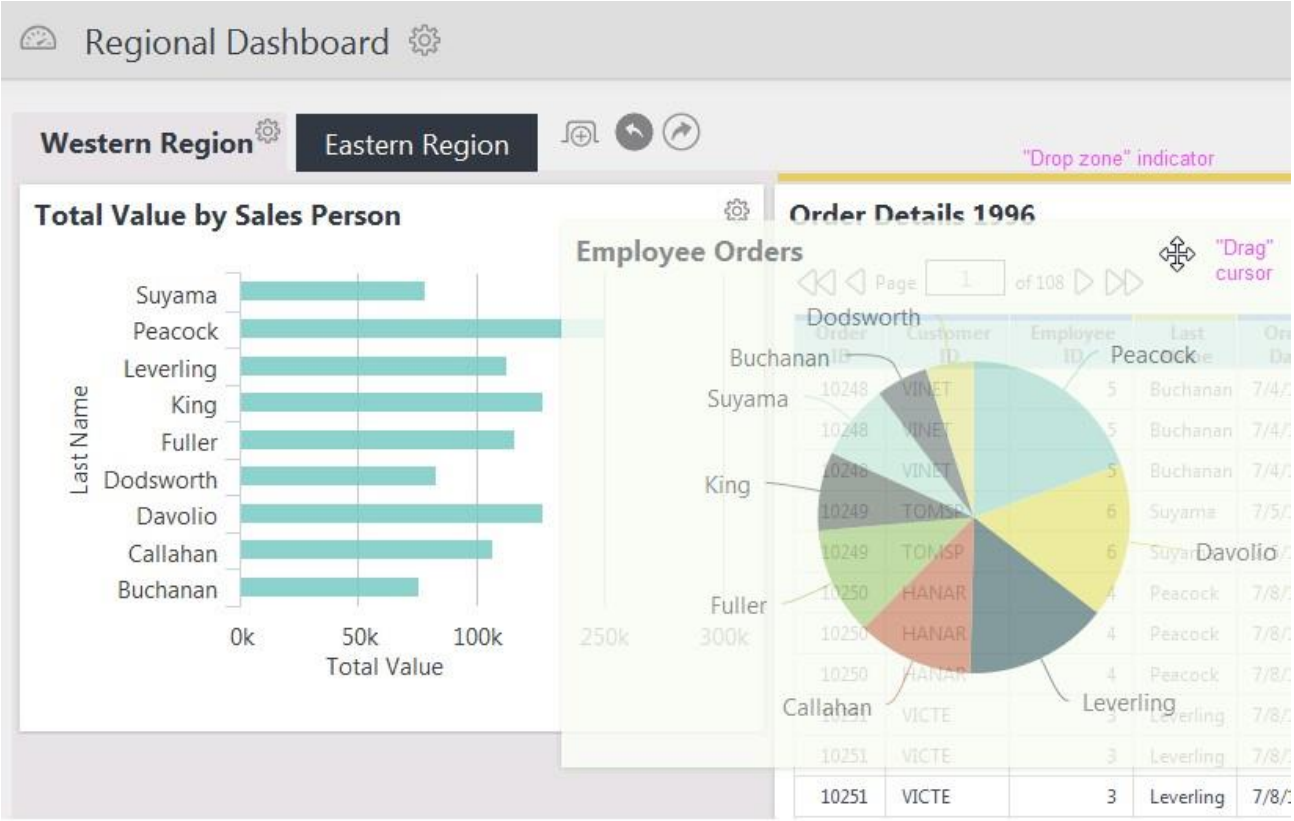
You can also select a *Free-form* layout instead of using columns - this allows panels to be in any arrangement, even overlapping.

Panel Settings and Placement

Each dashboard panel has its own settings icon:



The available options, shown above, allow you to change the panel title, or remove the panel from the dashboard.



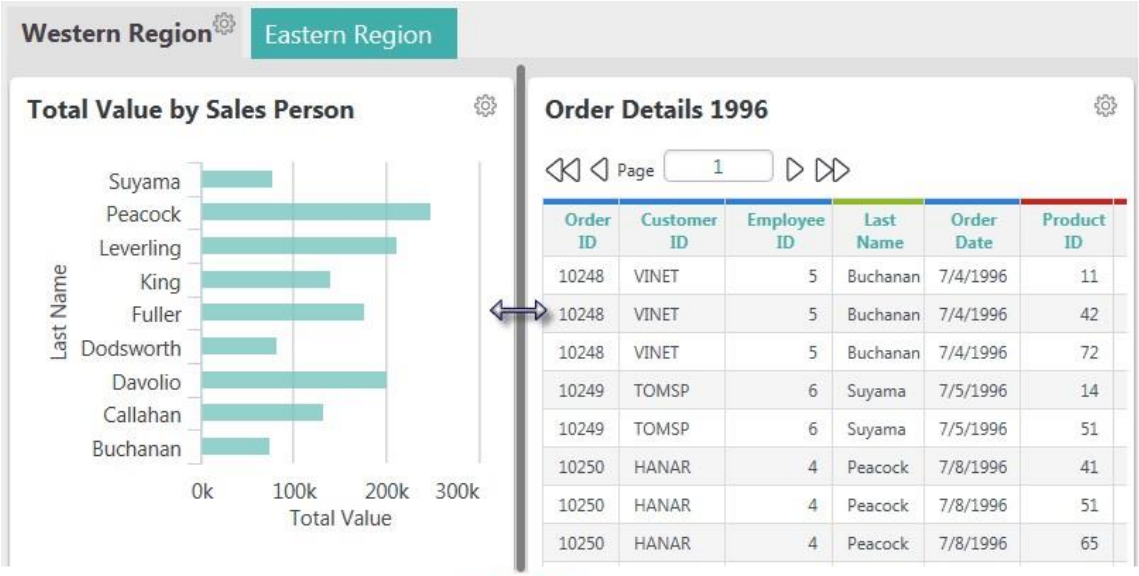
As shown above, panels can be re-arranged by dragging their title bar areas. When you do, the cursor changes to a *drag* cursor and a "drop zone" indicator (a yellow bar) will appear as you drag the panel toward a new location.

If the drop zone is above or between other panels, they'll move when the panel is dropped. The tab's layout setting controls where panels can be dropped, in columns or free-form.

Chart resizing handle

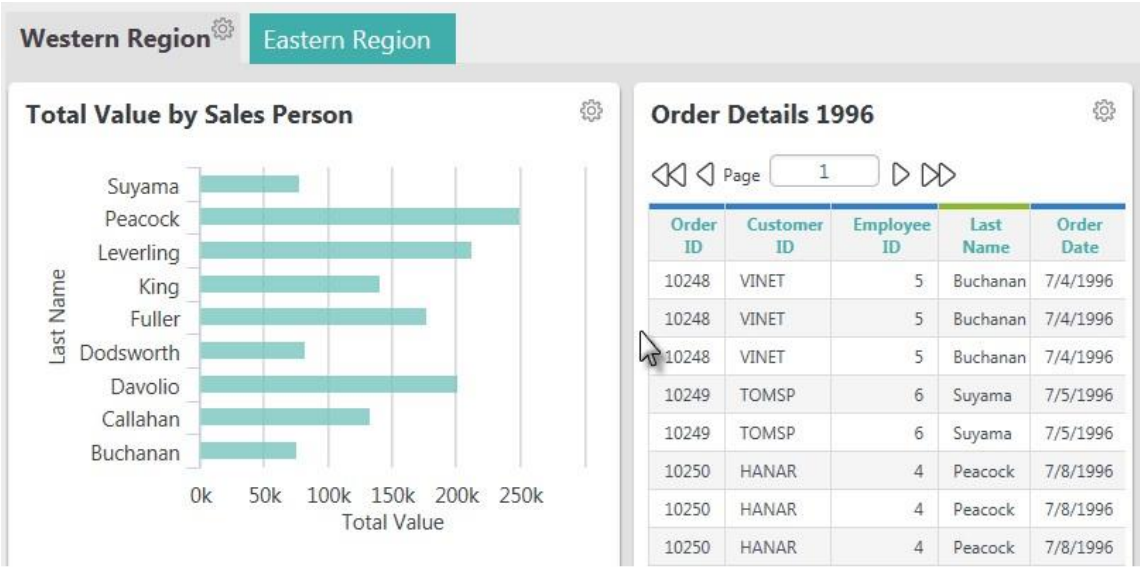
When the mouse cursor is hovered over a chart in a panel, a vertical resizing handle will appear. This can be used change the chart height and, if the chart is made tall enough, the panel itself will expand vertically, too.

The widths of layout columns (and therefore panels) in dashboards that are configured to be adjustable can be changed using the "splitter" bar:



"Splitter" bar

Hover your mouse cursor over the vertical space between two dashboard panels, as shown above, and a gray splitter bar will appear, as shown above.



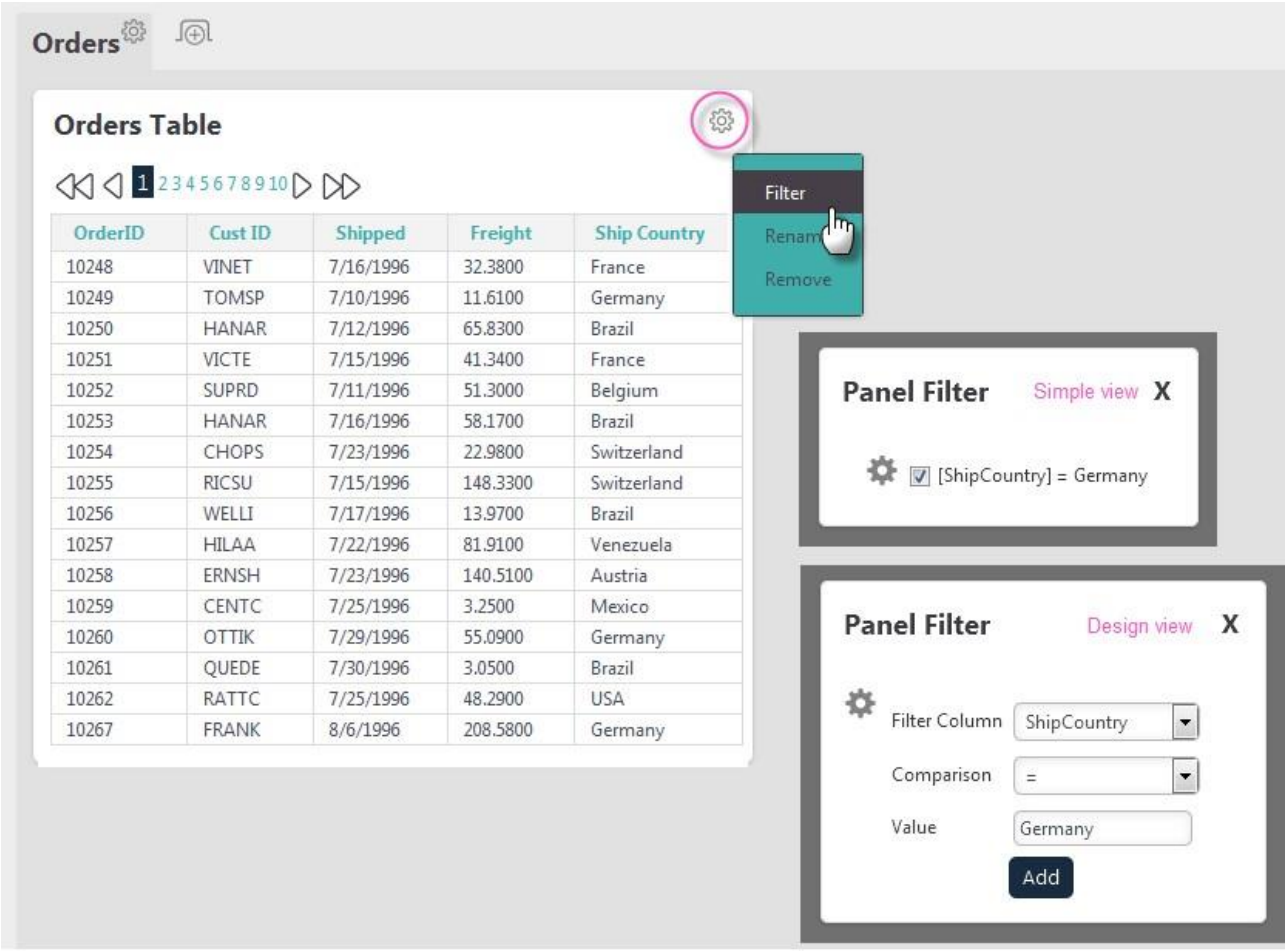
Drag the bar right or left to the adjust panel widths, then drop the bar at the desired location. Visualizations that don't have their Width attributes set will automatically adjust to match the change in panel widths.

Dashboard Filters

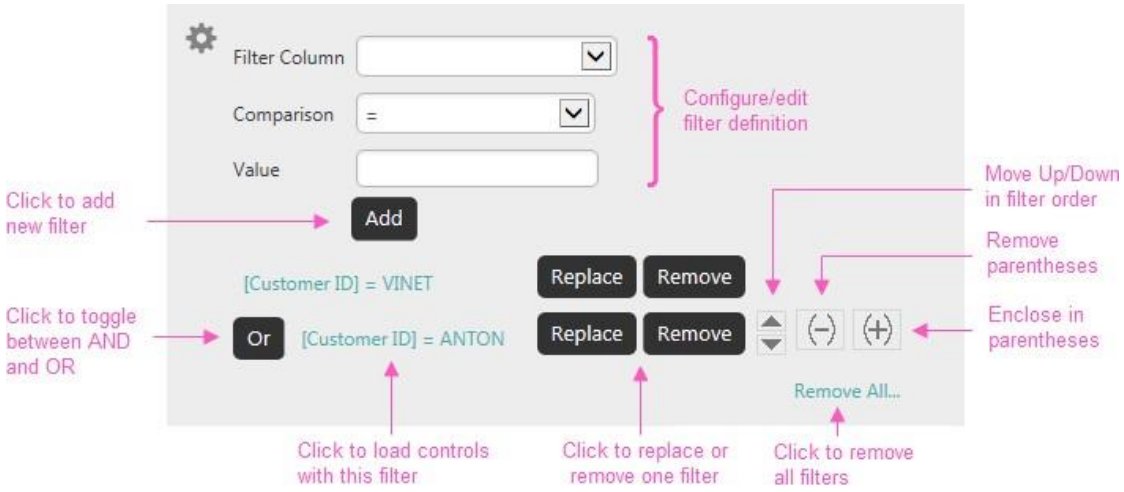
Your application may have been configured to allow dynamic filtering of the data in dashboard panels, individually and globally.

Filtering Individual Panels

If panel filtering has been enabled, clicking the panel's Gear icon will display a pop-up menu that has a *Filter* option:



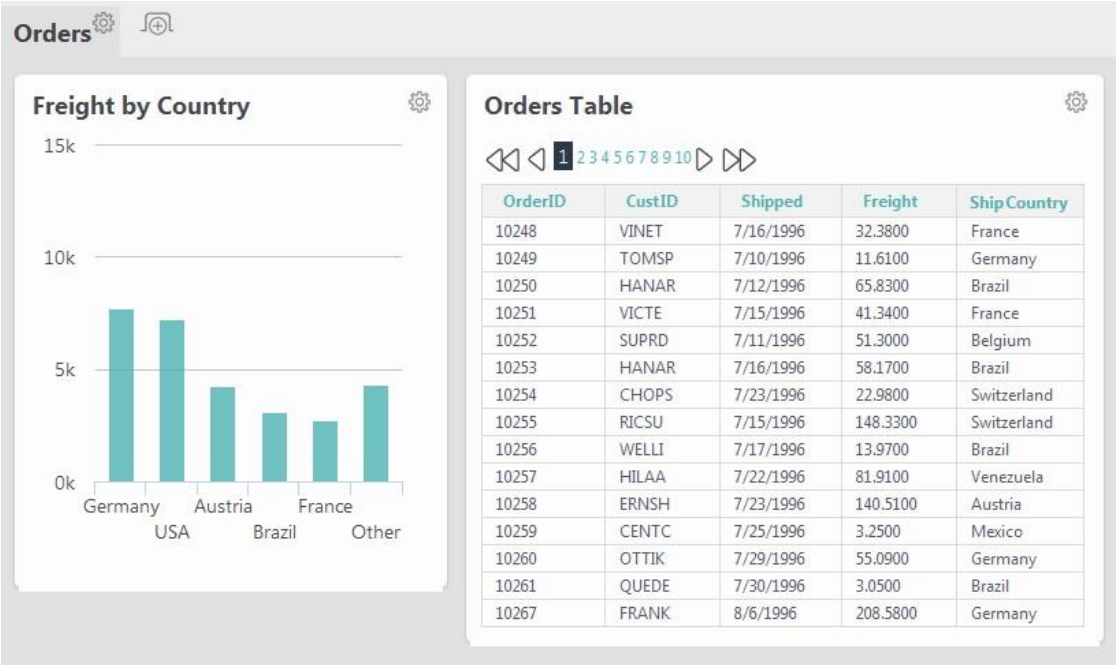
This option will open the **Panel Filter** panel, as shown above. The controls displayed in it will depend on the view mode, *Simple* or *Design*, configured by your application developer.



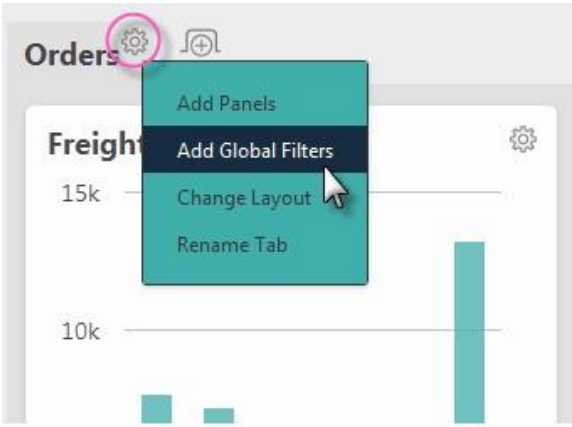
In Design view, you can define and combine filters, using the controls shown above. Adding, changing, or removing filters will immediately filter the data in the dashboard panel accordingly.

Adding a Global Filter

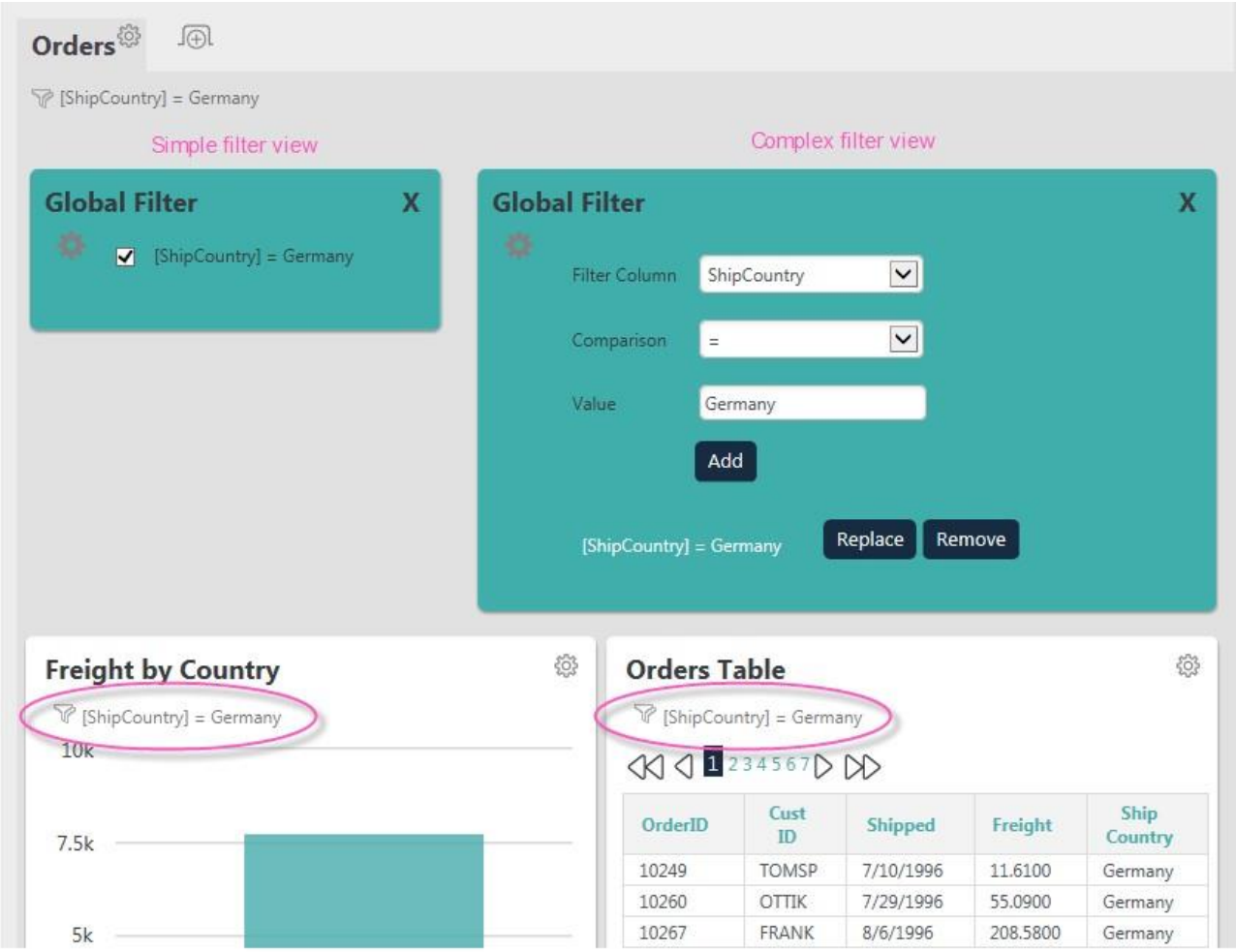
You can also add a "global" filter, one that affects the data used in *multiple* dashboard panels at once. This type of filter functionality is automatically available when multiple dashboard panels have been configured for filtering.



The example dashboard shown above has two panels, each of which has been configured for filtering and whose visualizations use data from the ShipCountry column.

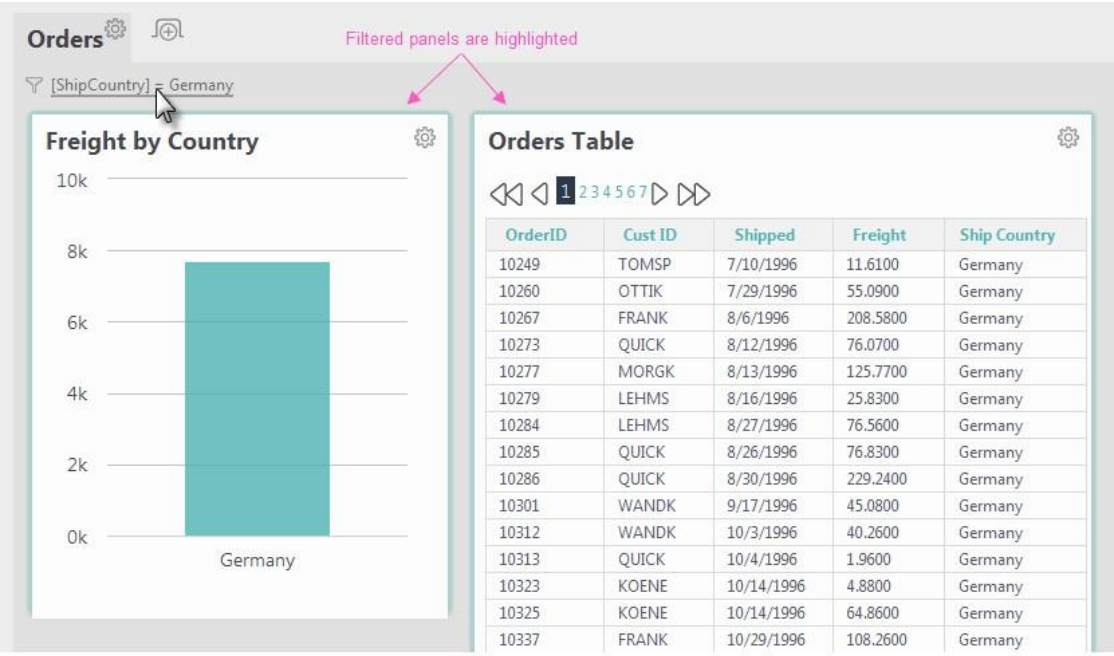


You can create a global filter by clicking the gear icon for the dashboard tab, as shown above, and selecting the *Add Global Filters* pop-up menu option.

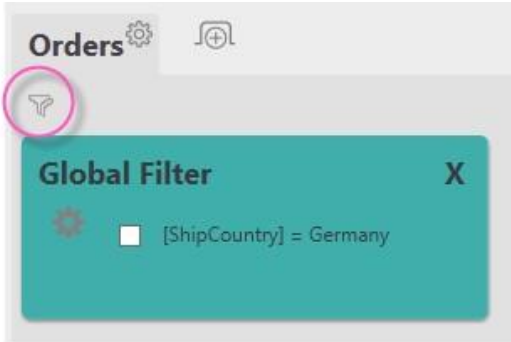


The **Global Filter** panel will be displayed, as shown above. The controls displayed in it will depend on the configured view mode and have been explained earlier. Once a filter has been created, dashboard panels with visualizations whose data includes the filter's data columns will be filtered; those that do not include the filter's columns will not be filtered.

Filter descriptions, circled above, will be added to each filtered panel and can be clicked to re-open the Global Filter panel.



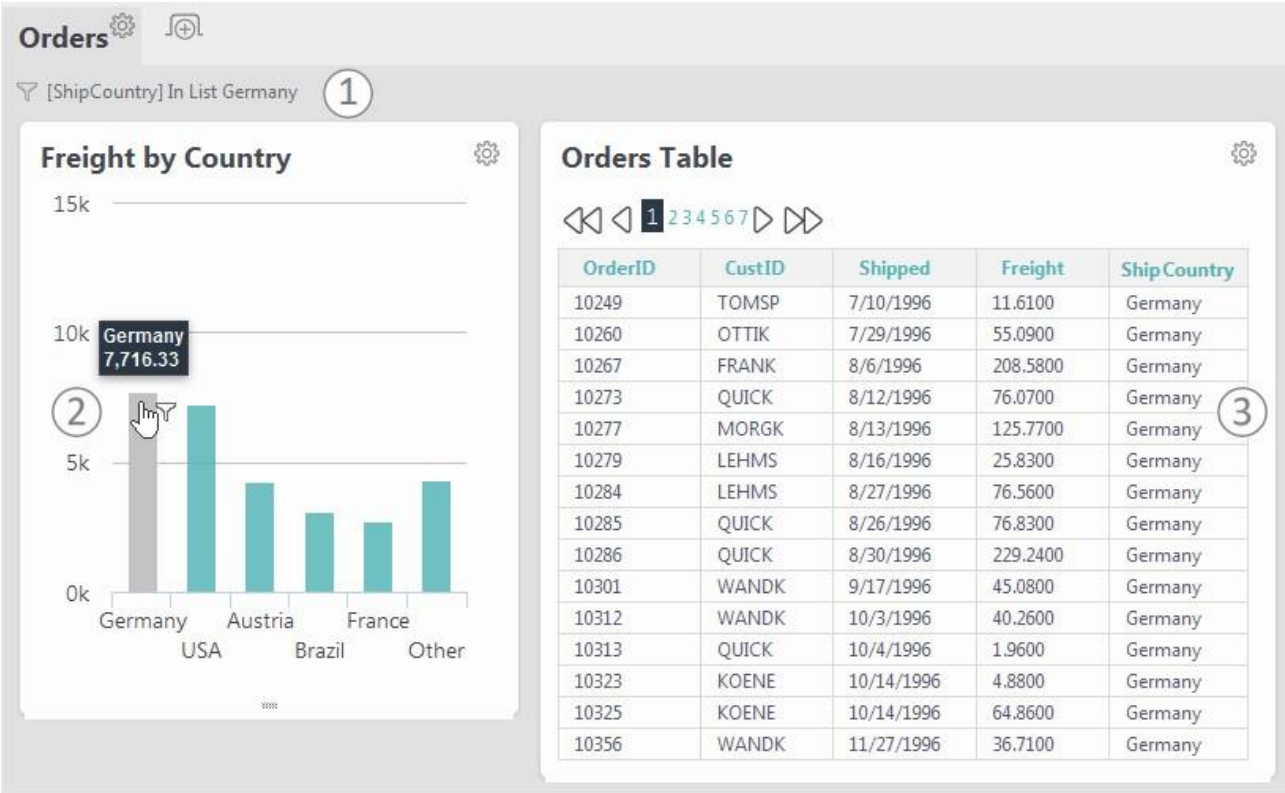
A global filter description will also appear at the top of the tab and can be used as a link to re-open the Global Filter panel. In addition, when you hover your mouse cursor over this description, the panels affected by the filter will be highlighted, as shown above.



When the Simple view mode is used, filters can be disabled by unchecking their checkbox. This causes the global filter description to be removed, but a filter icon, circled above, remains as an indicator that a global filter is defined and available for use. Clicking the icon will re-open the Global Filter panel.

Global Filtering using Chart Data Points

If your application has been configured to allow it, you can also create a global filter in a dashboard by selecting data points in a chart:



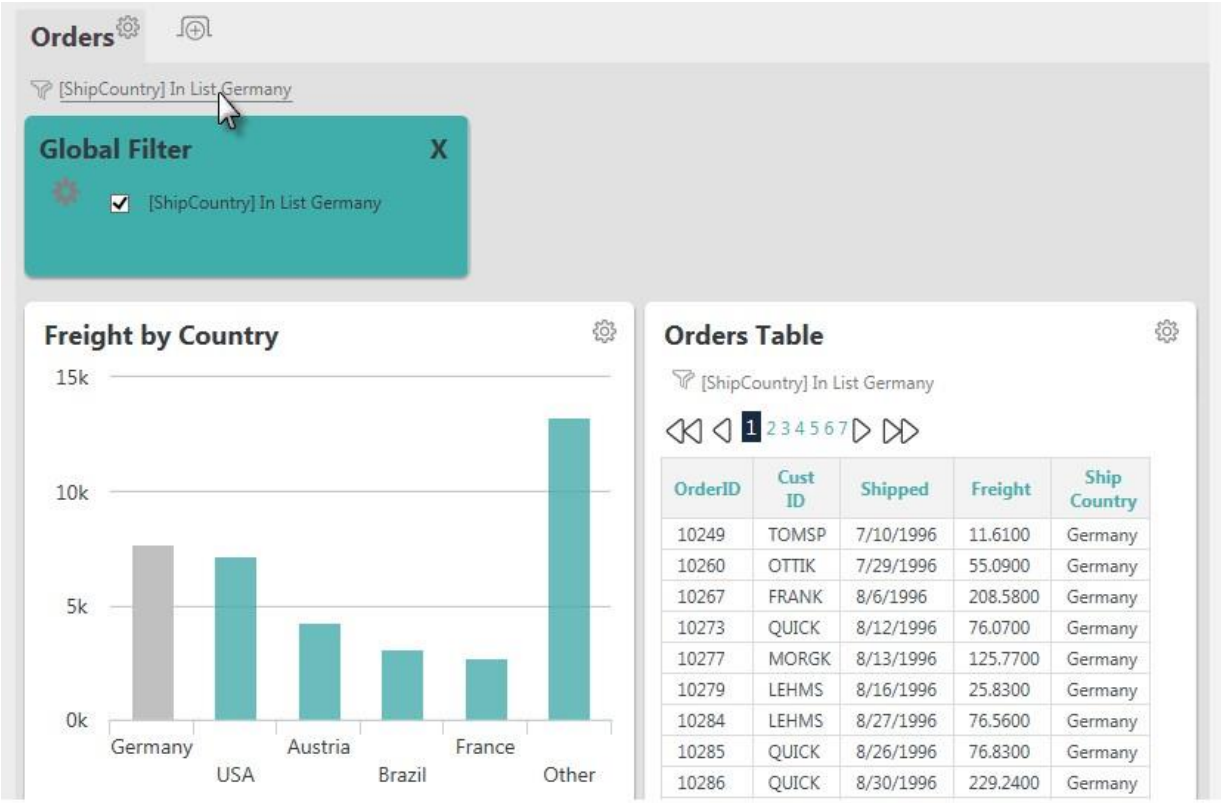
OrderID	CustID	Shipped	Freight	Ship Country
10249	TOMSP	7/10/1996	11.6100	Germany
10260	OTTIK	7/29/1996	55.0900	Germany
10267	FRANK	8/6/1996	208.5800	Germany
10273	QUICK	8/12/1996	76.0700	Germany
10277	MORGK	8/13/1996	125.7700	Germany
10279	LEHMS	8/16/1996	25.8300	Germany
10284	LEHMS	8/27/1996	76.5600	Germany
10285	QUICK	8/26/1996	76.8300	Germany
10286	QUICK	8/30/1996	229.2400	Germany
10301	WANDK	9/17/1996	45.0800	Germany
10312	WANDK	10/3/1996	40.2600	Germany
10313	QUICK	10/4/1996	1.9600	Germany
10323	KOENE	10/14/1996	4.8800	Germany
10325	KOENE	10/14/1996	64.8600	Germany
10356	WANDK	11/27/1996	36.7100	Germany

Once again, we have an example with two dashboard panels, one with a chart and one with a table, shown above. When you click a bar in the chart, a global filter is created automatically and three other things happen:

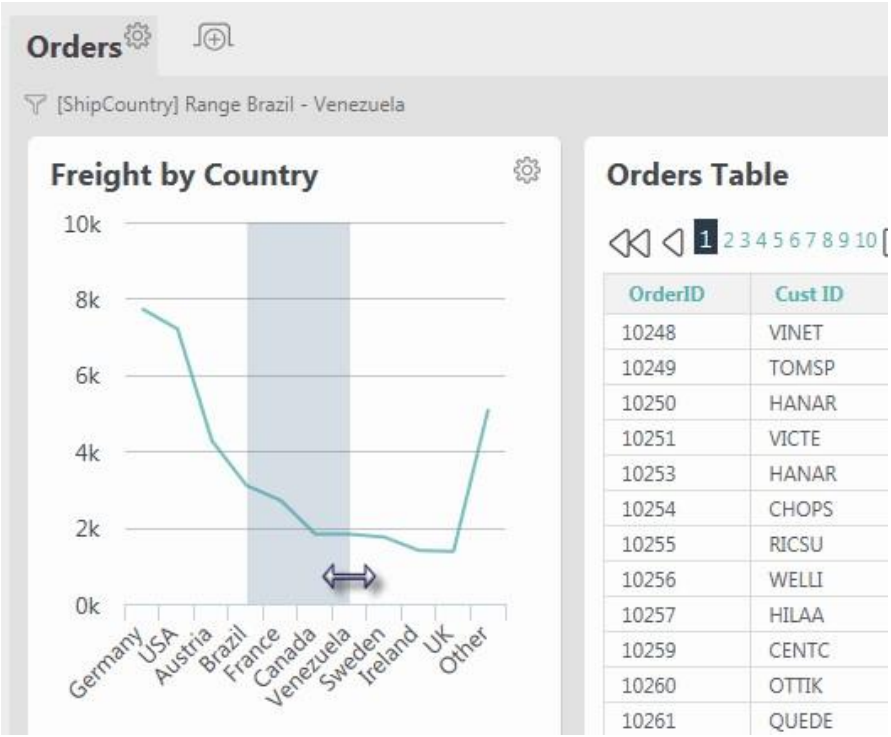
1. A Filter Description appears at the top of the dashboard tab. This can be clicked to edit the global filter.
2. The color of the selected chart bar changes to indicate it's included in a filter.
3. The data for the table in the second panel is filtered.

Note how this is different from the previous global filtering example: the chart that was clicked is *not* filtered.

Clicking the same chart bar a second time will cancel the filter related to that data. Clicking another bar will add additional criteria to the global filter



Clicking the Filter Description at the top of the dashboard tab will cause the automatically-generated Global Filter panel to be displayed. As before, the controls displayed in it will depend on the view mode, Simple or Design (only Simple mode is shown above).



For chart types that support it, you can also create a global filter by dragging the cursor to select a range of values, as shown in the Line chart above. This will create a global filter that includes the selected range of values.

Reports

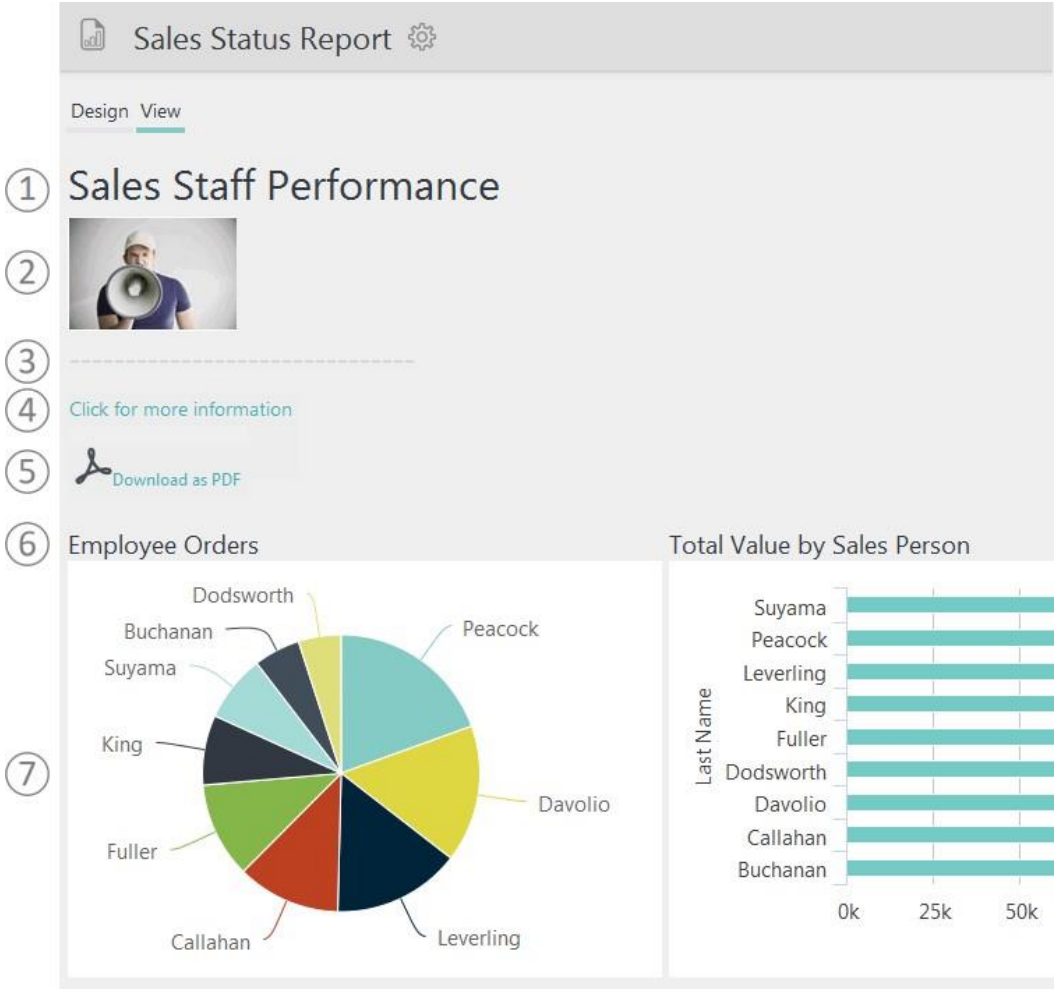
An Medusa Analytic report displays an arrangement of components that convey the information you want to see. Visuals from the Visual Gallery can be included in reports and the charts in them are fully functional in a report: their animation, hover highlighting, quicktips, etc. work just as they did in an analysis.

Each time the report is run or refreshed in the browser, its visuals will retrieve data from their databases and display it. The report is therefore a "snapshot" of the data as it was at the time the report was last refreshed. Reports you create are automatically saved and will appear in the list of resources in the My Items folder on the Home page.

From the Home page, click the **Design Report** option.

Report Components

Let's meet the building blocks of an Medusa Analytic report:



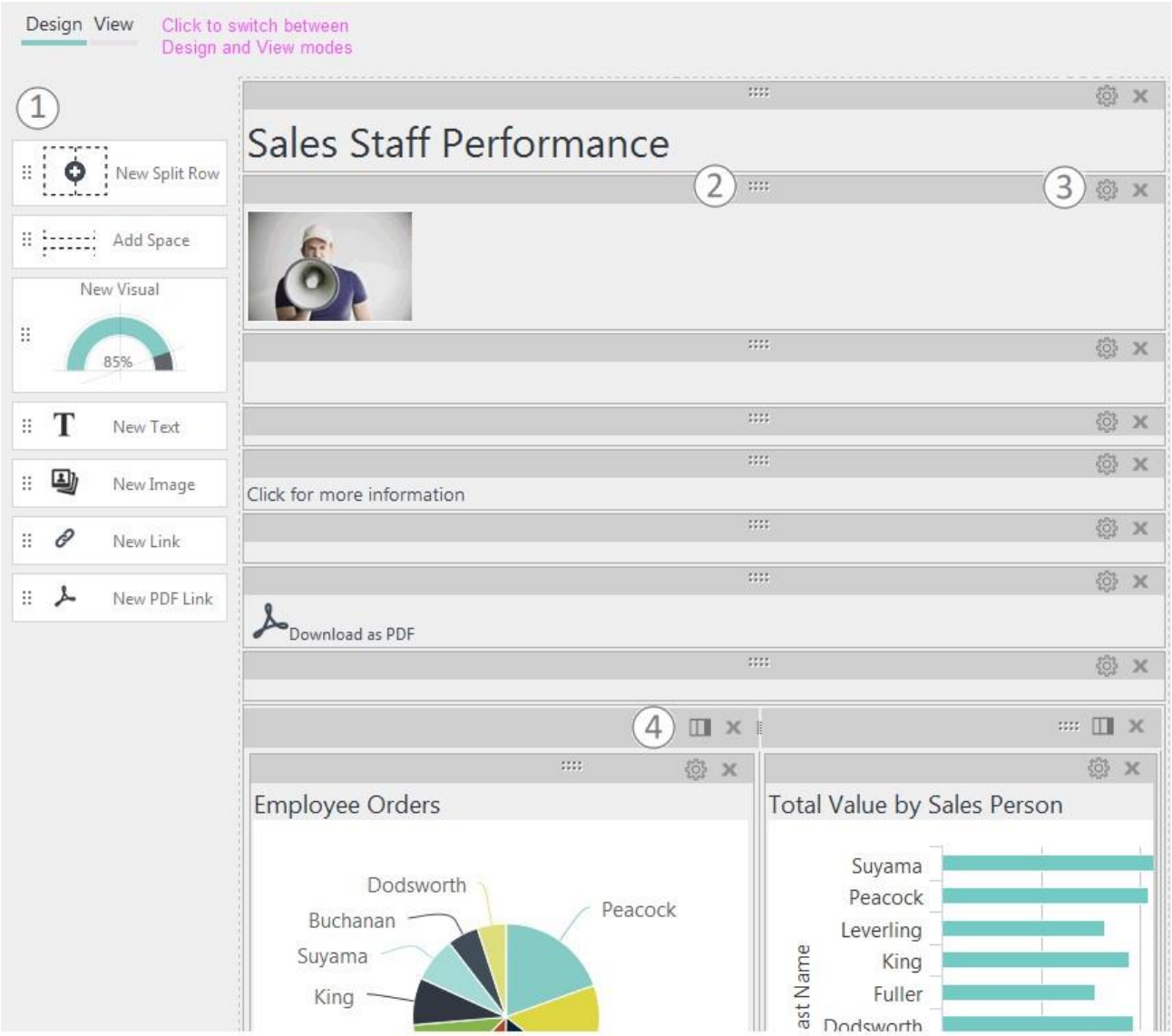
A report can use any of the following components:

1. **Text** - You can enter text to be displayed in the report. Various font attributes like *size* can be set as desired.
2. **Image** - You can upload an image for display in the report.
3. **Line Space** -You can add blank lines to provide vertical spacing (dotted line only shown above for clarity).
4. **Link** - You can add links to other reports or web pages.
5. **PDF Link** - You can add a link that will download the report to PDF format.
6. **Split Row** - You can add an empty row that's divided into multiple columns, then drag content into them.
7. **Visual** - You select a visual from your Visual Gallery for display in the report.

You may have as many of these components in your report as you'd like.

Report Design Mode

Just under the report title, you can see the Design and View links, which let you switch modes. When you elect to create a new report (from the Home page), it starts in Design mode but you can switch modes at any time. In Design mode, the components in the report will appear in a series of panels:



Design mode, shown above, lets you build or modify your report.

1. **Component Toolbox** - Components appear on the left. Drag them onto the report canvas to add them.
2. **Re-arrange** components on the canvas by clicking their drag icon - ⠿ - and dragging them into a new location.

   When you do this, the cursor changes to a *Drag* cursor and a "Drop Zone" indicator (a yellow bar) will appear as you drag the component toward a new location. If the drop zone is above or between other components, they'll move when the component is dropped.

3. **Configure** component settings or delete them by clicking their Gear or X icons.
4. **Add/Remove columns** for the Split Row component by clicking the Columns icon.

When you add a Visual component to the canvas, your Visual Gallery will be displayed and you can select one or more visuals to be inserted into your report. Chart animation, resizing, hover highlighting, and quicktips will all be active in the report. Each selected visual will be inserted into its own separate panel.

Report Settings

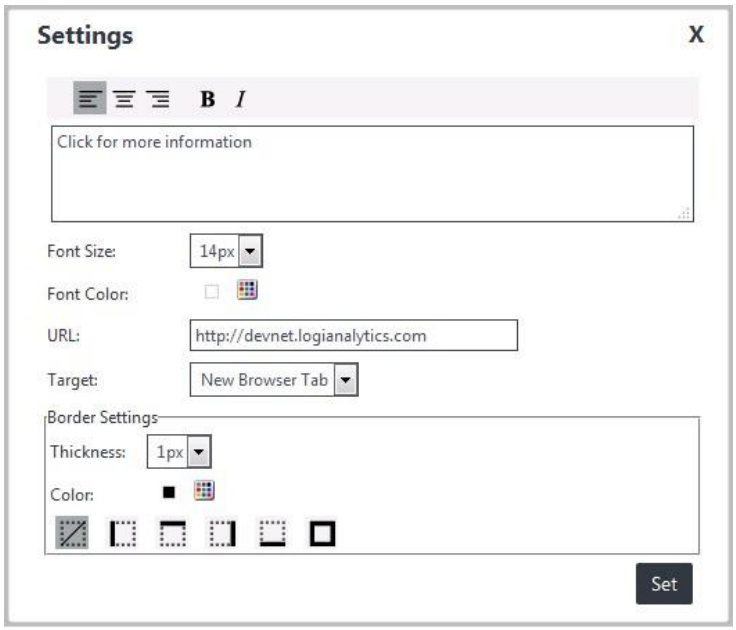
Report settings are configured by clicking the gear icon next to the report name:

The available options, shown above, allow you to change the report name or save a copy of the report into your My Items folder.

The name shown here identifies the report *inside* of the Medusa Analytic application and on the Home page resources list. However, it is *not* included (nor is the gear icon) when the report is downloaded as a PDF document.

Report Component Settings

Each component has its own settings, which are displayed by clicking the component's Gear icon:



As you'd expect, the settings will be different for different components. The settings for the **Link** component are shown above.

The **Text** component has a similar Settings panel, however, for quick text-only changes you can edit the text in place. Just hover your mouse cursor over the right end of the component, as shown above, to makes its special Pencil icon appear, then click it to edit the text.

Report Download to PDF

If you choose to include a "PDF Link" component, you should be aware of what the PDF version of the report will look like.

Viewed in InfoGO

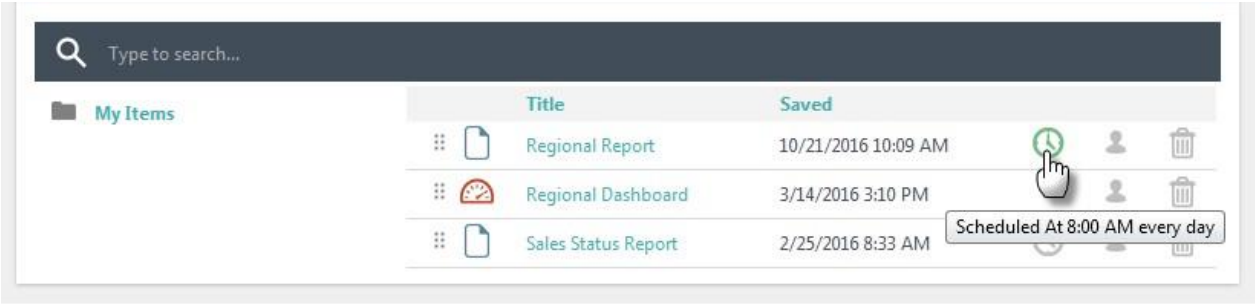
Downloaded as a PDF document

When the report is converted into a PDF, the internal Medusa Analytic report name, the Design and View buttons, and the PDF Link component itself are removed. The example above shows the differences. This means you'll most likely want to include a Label at the top of the report, as its *title*, if you plan to use the PDF Link component.

Scheduling Report Delivery

Reports can be scheduled for automatic generation and delivery via email as a PDF attachment. Dashboards and analyses cannot be scheduled.

It's easy to see if scheduling is enabled for each item in your Home page list. If it is, a clock icon will appear, as shown above. If not, no icon will appear. When reports have already been scheduled, a green clock icon appears.

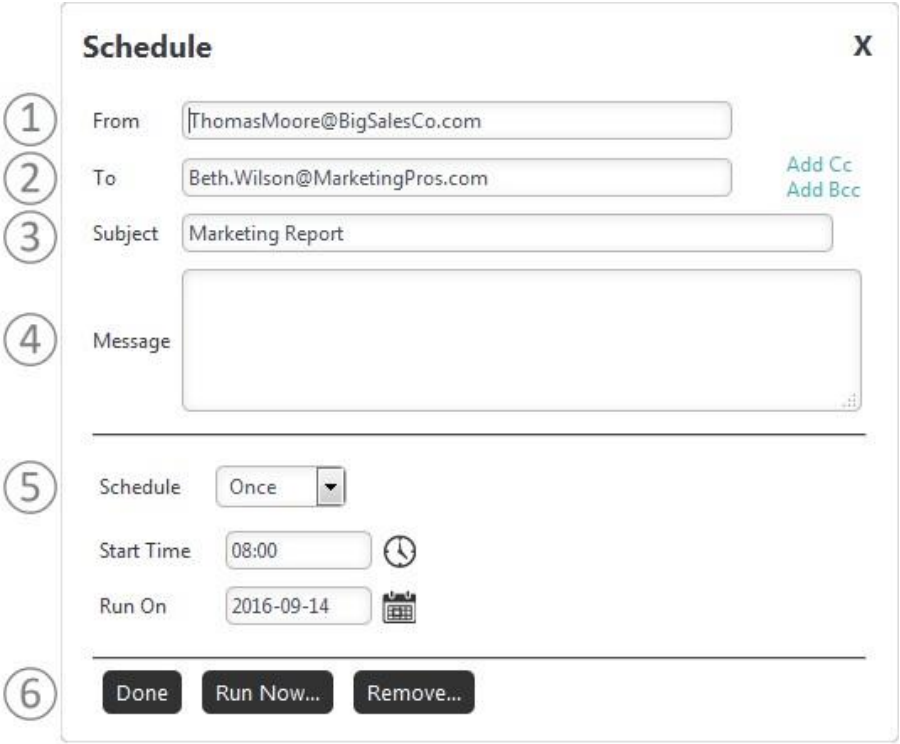


If a report *has been* scheduled, the details will be displayed in a tooltip made visible by hovering your mouse cursor over the green clock icon, as shown above.

Select a report and click its clock icon to set up or change its delivery schedule.

Report Scheduling Details

To schedule a report, you need to provide the delivery details and report generation frequency:



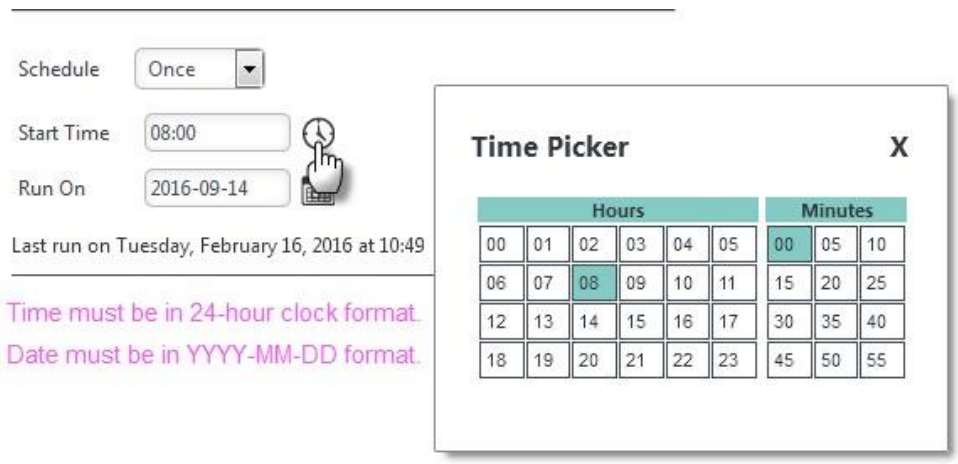
The Schedule panel is shown above. Its controls are:

1. **From** - Enter your email address (or the email address you want to appear as the "Sent From" address).
2. **To** - Enter the email address of the report recipient. Separate multiple addresses with a semi-colon (";").
3. **Subject** - Enter a brief subject description.
4. **Message** - Enter the text of the email message, included when the PDF or Excel format option is chosen.
5. **Schedule** - Select the interval and frequency for generating and delivering the report. These options change depending on the initial selection and are described in more detail below.
6. **Buttons** - Click **Done** to save the settings. Click **Run Now...** to generate and deliver the report immediately. Click **Remove...** to remove this scheduled occurrence.

You can also click the "X" icon to close the panel, without saving any changes, at any time.

Schedule Options: Once

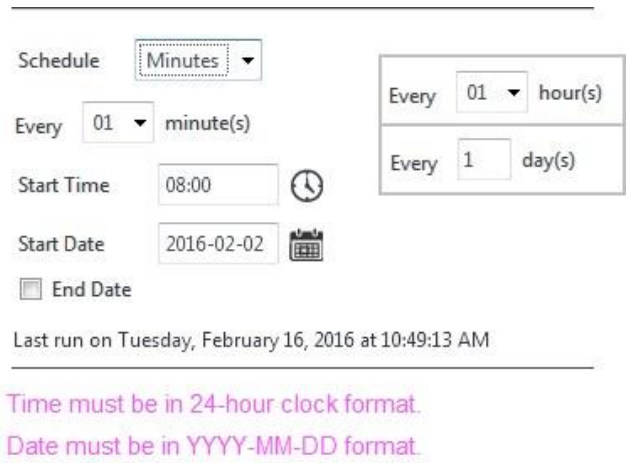
This option generates and delivers the report exactly one time:



- **Start Time** - Format must use the *24-hour* clock. You can select it from the Time Picker by clicking the clock icon, as shown above (selected time can be made more exact by editing it once it's in the input control).
- **Start Date** - Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.

Schedule Options: Minutes, Hours, Daily

This option generates and delivers the report every X minutes, hours, or days:

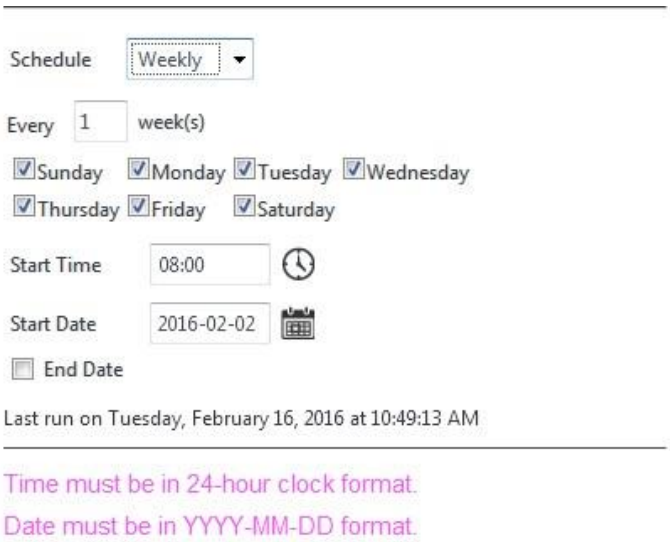


- **Every** - Select the interval of minutes, hours, or days desired. Use caution if selecting minutes; repetitive short time intervals may impact server performance.
- **Start Time** - Format must use the *24-hour* clock. You can select it from the Time Picker by clicking the clock icon, as shown above (selected time can be made more exact by editing it once it's in the input control).

- **Start Date** - Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.
- **End Date** - An optional date for stopping the scheduled deliveries. Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.

Schedule Options: Weekly

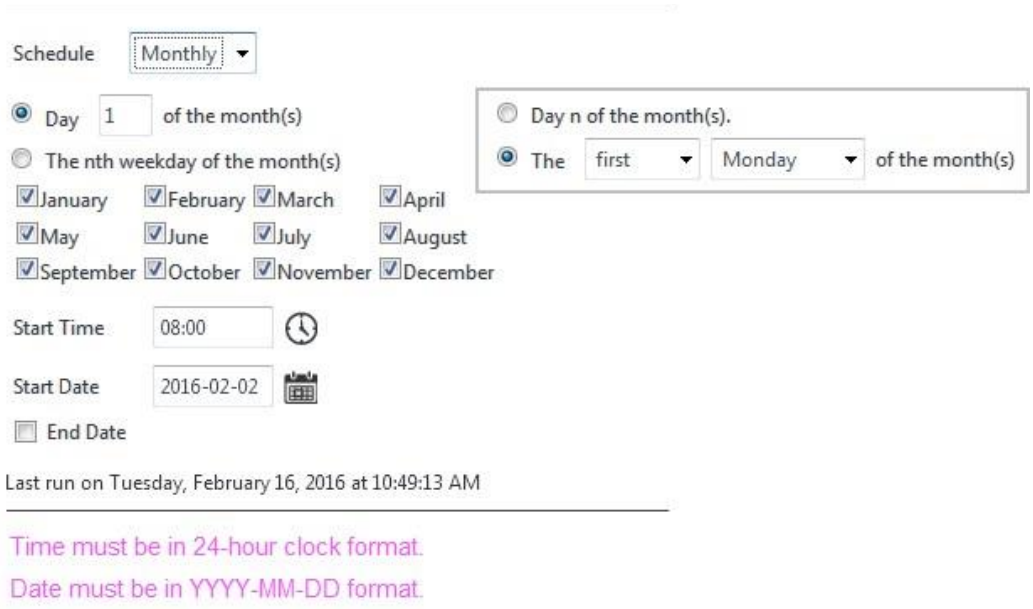
This option generates and delivers the report at various weekly intervals, on specific days of the week:



- **Every** - Select the interval of weeks desired.
- **Days** - Use the checkboxes to specify the exact days desired.
- **Start Time** - Format must use the *24-hour* clock. You can select it from the Time Picker by clicking the clock icon, as shown above (selected time can be made more exact by editing it once it's in the input control).
- **Start Date** - Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.
- **End Date** - An optional date for stopping the scheduled deliveries. Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.

Schedule Options: Monthly

This option generates and delivers the report on specific days in specific months:

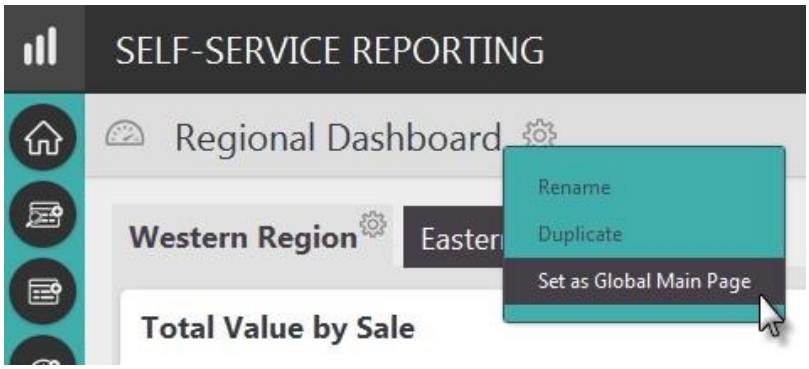


- **Day X of the Month** - Enter a specific day number, 1-31, for report delivery in each of the selected months. Ensure that the day number actually exists in each selected month (non-existent days will be skipped). - or -
- **Nth Weekday** - Select first, second, third, fourth, or last specific day of the week for report delivery in each of the selected months.

- **Start Time** - Format must use the *24-hour* clock. You can select it from the Time Picker by clicking the clock icon, as shown above (selected time can be made more exact by editing it once it's in the input control).
- **Start Date** - Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.
- **End Date** - An optional date for stopping the scheduled deliveries. Format must be *YYYY-MM-DD*. You can select it from a Calendar by clicking the calendar icon.

Admins: Designating a Global Main Page

If you've been designated as an Administrative User by permission in Medusa, you may be able to set a "global main page", which will be the starting page all users will see (rather than the Home page) when they first run the application.



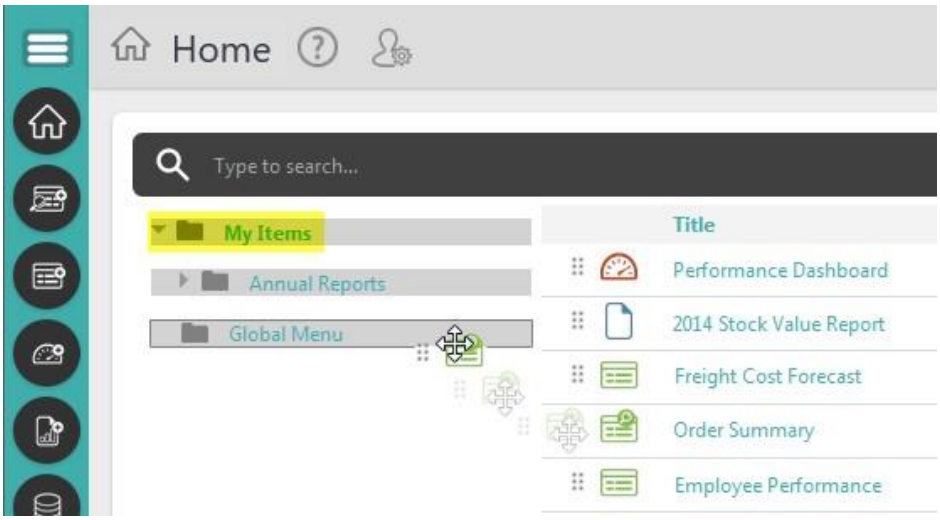
To do this, navigate to a dashboard or report that you want to be the global main page and click its main Gear icon. You'll see the **Set as Global Main Page** option, as shown above. Once the main page is set, the same option becomes **Unset as Global Main Page** to reverse the process, if desired.

Once a main page has been set, the Main Page option will appear at the top of your menu, as shown above. You may need to refresh the page or close and restart your browser in order to see it.

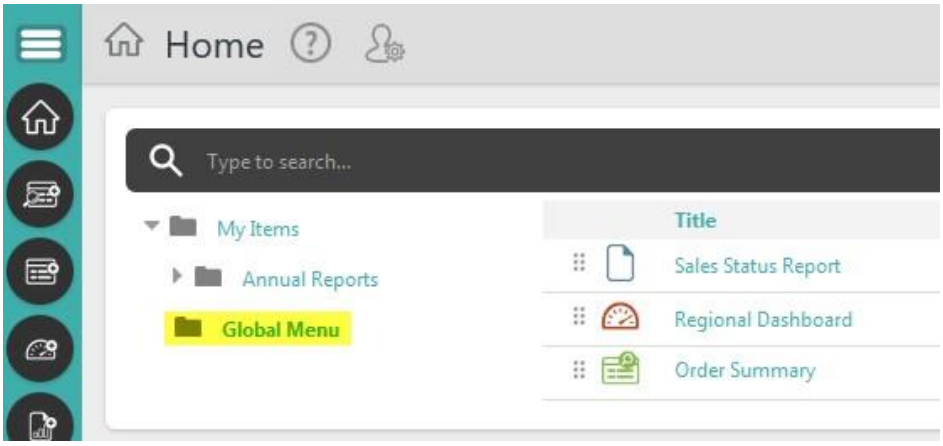
If the dashboard or report set as the global main page has been, or is subsequently, shared with others, they too will see it as their starting page.

Admins: Creating a Global Menu

If you've been designated as an Administrative User by permissions in Medusa, you may be able to configure a "global menu", which is a menu of links to selected dashboards, reports, and analyses, that's available to all users.

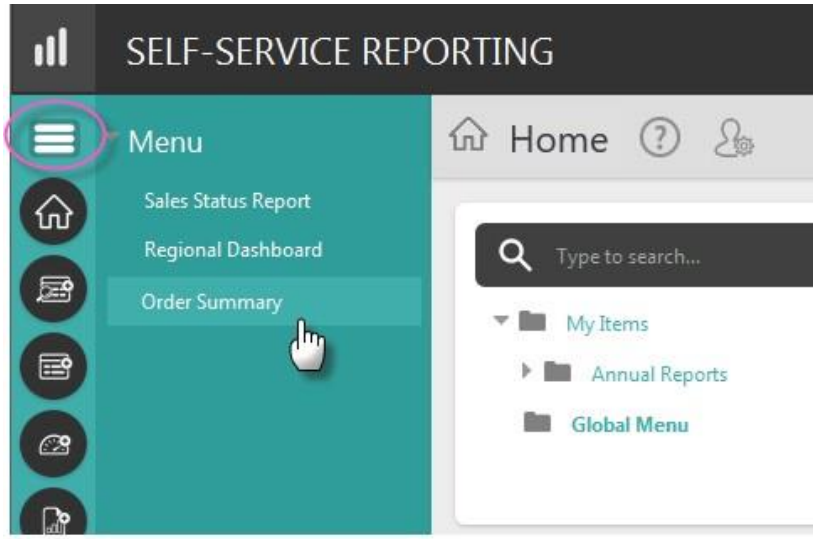


If you have the necessary security permission, you'll see a "Global Menu" folder in you folder list. You can drag resources into, just like any other shared folder, as shown above.



If you select the Global Menu folder, you'll see its contents and can manage them just like any other folders.

Remember that items in this folder are *not* copies of, or links to, items in other folders. To remove them from the global menu *without deleting them*, drag them back to the folder they came from.



Once items have been dragged into the Global Menu folder and your browser has been refreshed, a "hamburger" icon will be available at the top of the side-bar menu, as shown above. When *any* user clicks it, a menu of links to the items in the Global Menu folder will slide out from the left, as shown above.

Other users don't need specific permission to use the menu. Resources in the menu are automatically available to other users without the need to explicitly share them, but they can't be modified beyond a simple resizing of charts.